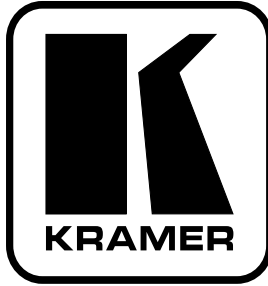


Kramer Electronics, Ltd.



USER MANUAL

Models:

SV-551 Processor / Switcher

SummitView™ Essentials Kit

SummitView™ Standard Kit

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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups¹ that are clearly defined by function.

Congratulations on purchasing your Kramer *SummitView™* system! This user manual comprises of four parts:

- **PART I:** A description of the *SummitView™* system, its devices including a quick start section
- **PART II:** A definition of the **SV-551** *SummitView™ Processor / Switcher*
- **PART III:** Detailed installation instructions - installing the Wall Plates, the Ceiling Speakers, the **SV-2** Ceiling Platform and Projector Bracket, and the **SV-551** *SummitView™ Processor / Switcher*
- **PART IV:** Further information

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original boxes and packaging materials for possible future shipment
- Check that your SummitView™ Kit is complete. Use the CHECK LIST in Table 17 to verify the contents of the Essentials Kit, or the one in Table 18 to verify the contents of the Standard Kit
- Review the contents of this user manual²

PART I Your SummitView™ System

PART I describes the SummitView™ system and its devices.

1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Twisted-Pair Solutions; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

2 Download up-to-date Kramer user manuals from the Internet at this URL: <http://www.kramerelectronics.com>

3 Overview

We have designed a complete and simple solution for the integration of media and control in classrooms, training rooms and presentation rooms.

SummitView™ is as easy to use as it is to specify and install. The components that make up the *SummitView™* system are available as either standalone products or as Kits with everything included - wall plates, room controllers, amplifier, speakers, cable and even enclosures ready to be mounted to projection mounts is included. With *SummitView™* you get everything you need for a high end integrated media system – just add the displays and sources. All the signals are transmitted over economical CAT 5 cable and switched using the **SV-551 Switcher / Processor**. The *SummitView™* System controlled via the network is everything you need from the company you can count on for quality products and the ultimate in customer support – Kramer Electronics.

3.1 Your SummitView™ Kits

Sections 3.1.1 and 3.1.2 define the *SummitView™* **ESSENTIALS KIT** and *SummitView™* **STANDARD KIT**, respectively.

3.1.1 The SummitView™ ESSENTIALS Kit

The *SummitView™* **ESSENTIALS Kit** includes these products:

- **SV-551** SummitView™ Processor / Switcher
- **RC-63DL** Room Controller
- **SV-301** and **SV-302** *Wall Plate Devices*
- **SPK-CC444** *Speakers*
- Required cables (for full details see Table 14 and the CHECKLIST in Table 17), and screwdrivers (provided with the **RC-62**, **RC-63** and **SV-551**)

3.1.2 The SummitView™ STANDARD Kit

The *SummitView™* **STANDARD Kit** includes these products:

- **SV-551** SummitView™ Processor / Switcher
- **RC-63DL** Room Controller
- **SV-301** and **SV-302** *Wall Plate Devices*
- **SPK-CC444** *Speakers*
- Required cables (for full details see Table 14 and the CHECKLIST in Table 18), and screwdrivers (provided with the **RC-62**, **RC-63** and **SV-551**)
- **SV-1**, a housing unit for the **SV-551** and power supply enclosure
- **SV-2**, Ceiling Platform and Projector Bracket with the **SV-CL-6** (a 6" pole)

The following additional products are available for purchase (optional):

- **SV-303, SV-304, and SV-305** *Wall Plate Devices*¹
- RC-62 Series (**RC-62, RC-62P, RC-62L**), RC-63A Series (**RC-63A, RC-63AL, RC-63AP**), and RC-63D Series (**RC-63D, RC-63DL, RC-63DP**) *Room Controllers*²
- **SPK-CC688, SPK-CC448, SPK-CC348F** *Speakers*
- Various columns and other projector mounting accessories

The following items are not provided by Kramer: projector (or display device), screen (and mounting hardware), source devices, like a DVD/VCR player, scanner, or computer, hardware that is required (where needed) for the installation, such as bolts for concrete structural ceilings, toggles (used for screen mounting on dry wall) and so on, and power inserts for the power outlets (see Table 8).

To achieve the best performance:

- Consider the condition of the room—its size, the way it is arranged, whether the walls and ceiling are drywall or cement—that may limit where and how you can install *SummitView*TM, where required, refer to the ADA requirements (see section 10)

Where an internal installation is impractical (for example, if the walls and ceiling are constructed of cement and you do not want to drill inside them), you can install the *SummitView*TM *System* externally, that is, install the **SV-551** in a rack (see section 8.3)

- Connect only good quality connection cables and avoid interference from neighboring electrical appliances and position your *SummitView*TM away from moisture, and excessive sunlight



Caution – No operator-serviceable parts inside unit.

Warning – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

Warning – Check that the weight of the projector and the interface bracket together falls within the maximum support weight of the projector.

Warning – Do not put your fingers between movable parts.

¹ Download the user manual: SV-301, SV-302, SV-303, SV-304, SV-305. at: <http://www.kramerelectronics.com>

² Download the user manual: RC-62, RC-63A and RC-63D Series at: <http://www.kramerelectronics.com>

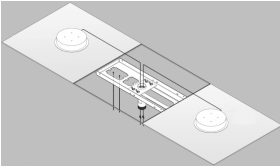
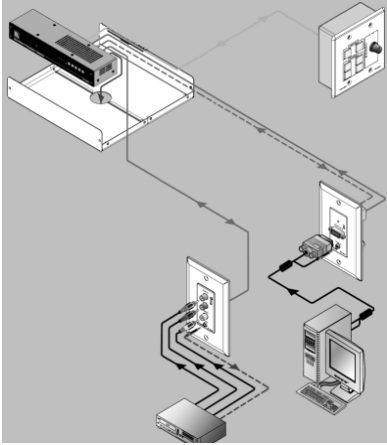
3.2 Quick Start Configuration Setup

Refer to the color configuration page included with your *SummitView™* Kit.

3.3 9-Step STANDARD Kit Quick Installation Guide

This data summarizes how to install your *SummitView™* STANDARD Kit (similar principles apply if you are installing other *SummitView™* configurations).

Table 1: Quick Installation Guide for the SummitView™ STANDARD Kit

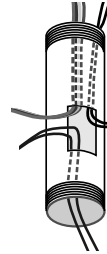
Description		
1 Cut the ceiling tiles ready for the SV-2 (Ceiling Platform) and the ceiling speakers:		and prepare the openings for the Wall Plates: SV-301 and SV-302, and the Room Controller, RC-63DL
2 Route the wiring from the proposed location of the SV-551 via: 1. Two STP cables¹ to the intended SV-301 location 2. One STP cable to the intended SV-302 location 3. K-NET cabling to the intended RC-63DL location 4. Speakers' cabling to the speakers' intended location 5. If the SV-551 and/or the RC-63DL are to be used as room controllers, route the appropriate control cables to their intended locations		
3 Install the Wall Plates by connecting the: 1. STP cables to the wall plates and installing the wall plate 2. BCP-KNET-50 cable to the RC-63DL and installing the RC-63DL (see section 11)		

¹ There are two types of STP cable provided with SummitView™: CP-STP-50 (plenum-rated for the SummitView™ US) or C-STP-50 (non-plenum for the SummitView™ Europe)

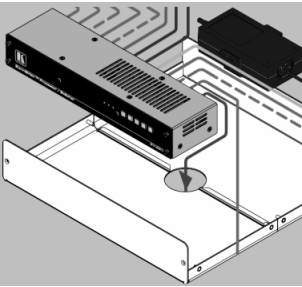
Description

- 4** Install the Ceiling Speakers; install the SV-2 (ceiling platform); install the SV-CL column (the SV-CL-6 is a 6"; the SV-CL-9 is a 9")

Pass the cables going to the SV-551 through the opening in the SV-CL column

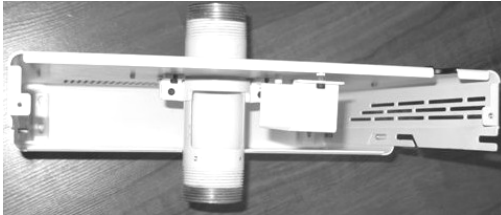


- 5** Install the SV-551 and power supply inside the SV-1



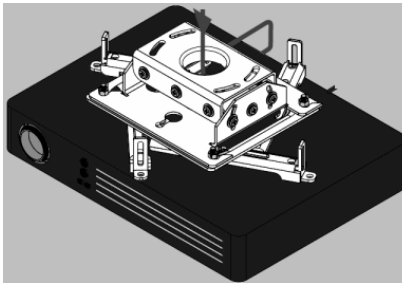
and prepare to connect the appropriate wiring—STP, and BCP-2S-25—from the wall plates and the RC-63DL and from the SV-551 to the speakers

- 6** Connect the SV-1 to the SV-CL column:



and connect the cables to the SV-551 and close the SV-1

- 7** Connect the SV-2 (Projector Bracket) to the projector:



and connect the SV-2 (Projector Bracket) to the SV-CL column

Description
8 Install the projector and the screen. Connect the projector to the SV-551 video outputs using the supplied video cables. Connect the RS-232 cable between the SV-551 and the projector. Turn ON the SV-551 and the projector. By choosing the input channels of the SV-551 (from the front panel buttons) and of the projector you should be able to switch between inputs connected to the different wall plates
9 Load the control program to the SV-551 via its PROGRAM port. For additional information regarding how to program the SV-551, refer to the separate online “RC-SV Configuration Guide” at http://www.kramerelectronics.com. You should now be able to control the SV-551 programmed functions from the RC-63DL

PART II The SV-551 SummitView™ Processor / Switcher

PART II defines the **SV-551** SummitView™ Processor / Switcher.

4 Defining the SV-551 SummitView™ Processor / Switcher

The Kramer **SV-551** *SummitView™ Processor / Switcher* is designed specifically for the SummitView™ system and is an integral part of it. It fits inside the **SV-1** housing. The **SV-551** can only be controlled via the default **RC-63DL** or via one of the other (optional) controllers: **RC-62**, **RC-62P**, and **RC-62L**, or the **RC-63A**, **RC-63AL**, **RC-63AP**, **RC-63D** and **RC-63DP** controller. The **SV-551** features CAT 5 video and audio inputs (including optional DDC for VGA). It also has an IR output for video sources and features a Master controller, as well as a power amplifier and audio line out. The **SV-551** front panel controls include five input selector buttons, three LEDs, and a USB port. It receives input signals via the RJ-45 CAT 5 connectors from the **SV-301**, **SV-302**, **SV-303**, **SV-304**, and the **SV-305** wall plate devices. The **SV-551** RJ-45 CAT 5 inputs include: two for video, three for computers, and three DDC connectors.

The **SV-551** has a projector output on a 15-pin HD connector, one component video on three RCA connectors, two composite video outputs, each on an RCA connector, and an s-Video output on a 4p connector. In addition, the **SV-551** features terminal blocks for a balanced stereo audio speakers output, terminal blocks for an AUX input, 10V volume, relays, RS-232, and RS-485. The **SV-551** is controlled by one of Kramer's SV controllers (**RC-62** or **RC-63**) via the proprietary communication channel K-NET, and can also be controlled via the Ethernet and/or the front panel input selector buttons. The **SV-551** is 12VDC fed.

Figure 1, Figure 2 and Table 2 define the **SV-551 SummitView™ Processor / Switcher**:

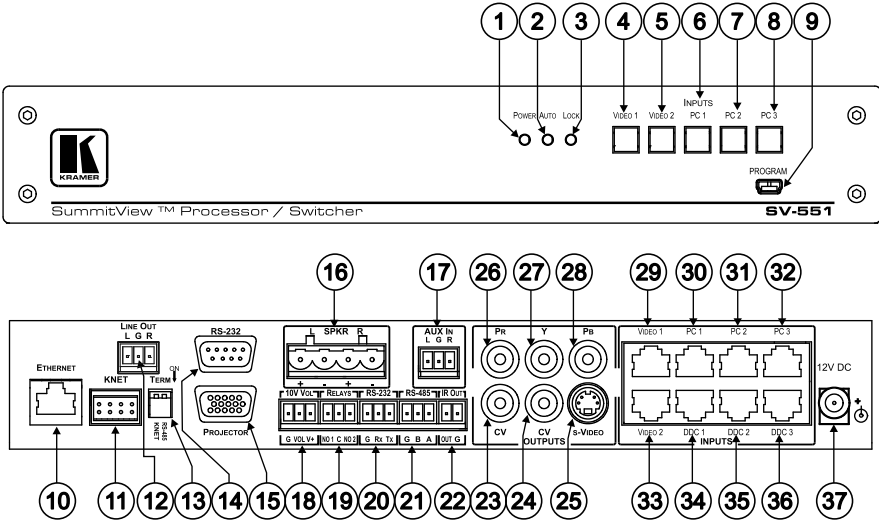


Figure 1: SV-551 SummitView™ Processor / Switcher

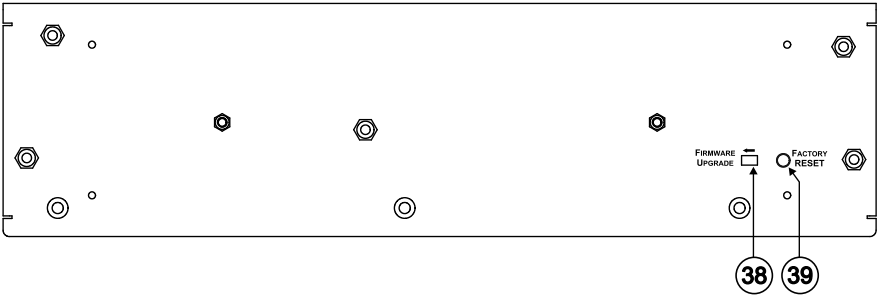
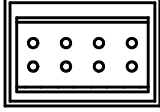


Figure 2: SV-551 SummitView™ Processor / Switcher Underside

Table 2: SV-551 SummitView™ Processor / Switcher Underside Features

#	Feature	Function
1	POWER LED	Lights when receiving power to the unit
2	AUTO LED	Lights when the unit is configured to automatically identify and select an input according to a set priority
3	LOCK LED	Lights when the front panel buttons are locked
4	INPUT Buttons (used for testing)	VIDEO 1
5		VIDEO 2
6		PC 1
7		PC 2
8		PC 3
9	PROGRAM Connector	Connect to a computer for configuration of the unit (a USB cable is provided with the Controller)
10	Ethernet Connector	Connects to the PC or other Controller through computer networking, for control and configuration of the unit
11	K-NET ¹ Connector	PIN GND is for the Ground connection; PIN B (-) and PIN A (+) are for RS-485, and PIN +12V is for powering the unit. For details of how to connect K-NET, see Figure 27 
12	LINE OUT Terminal Block Connections	Connect to an external audio amplifier
13	TERM Dipswitches	Dipswitches for line termination of the unit (DIP 1 is for KNET, DIP 2 is for RS-485)
14	RS-232 DB 9M Port	Connects to the projector for projector control
15	PROJECTOR 15-pin HD connector	Connects to the projector
16	SPKR Terminal Block Connections	Connect to the left and right speakers
17	AUX IN Terminal Block Connections	Connect to an additional audio source for mixing it with the audio line level input (talk over)
18	10V VOL Terminal Block Connections	Connect to an external potentiometer on a wall plate ² to adjust the volume of the speakers
19	RELAY Terminal Block Connections	Connect to a room item (such as lighting, screen settings, blinds, and so on)
20	RS-232 Terminal Block Connections	Connect to the RS-232 connector on the A/V equipment or a PC or other Serial Controller
21	RS-485 Terminal Block Connections	Connect to the RS-485 detachable terminal block on a switcher or PC
22	IR OUT Terminal Block Connections	Control a machine via an IR Emitter
23	CV RCA Connector	Connect to the composite video 1 input of the projector
24	CVRCA Connector	Connect to the composite video 2 input of the projector
25	s-Video 4p Connector	Connect to the s-Video input of the projector

¹ K-NET is a proprietary Kramer protocol for interconnecting Kramer units

² For example, the RC-63A

#	Feature	Function
26	<i>P_R</i> RCA Connector	Connect to the component video input of the projector
27	<i>Y</i> RCA Connector	
28	<i>P_B</i> RCA Connector	
29	VIDEO 1 RJ-45 Connector	Connect to the video 1 source via the CAT 5 socket on the rear of the SV-302 or SV-303
30	PC 1 RJ-45 Connector	Connect to the PC 1 source via the CAT 5 socket on the rear of the SV-301. Alternatively, connect to a Component video source (via the SV-304 or the SV-305). The relevant DDC connector, when also connected, can be used for IR control of that source
31	PC 2 RJ-45 Connector	Connect to the PC 2 source via the CAT 5 socket on the rear of the SV-301. Alternatively, connect to a Component video source (via the SV-304 or the SV-305). The relevant DDC connector, when also connected, can be used for IR control of that source
32	PC 3 RJ-45 Connector	Connect to the PC 3 source via the CAT 5 socket on the rear of the SV-301. Alternatively, connect to a Component video source (via the SV-304 or the SV-305). The relevant DDC connector, when also connected, can be used for IR control of that source
33	VIDEO 2 RJ-45 Connector	Connect to the video 2 source via the CAT 5 socket on the rear of the SV-302 or SV-303
34	DDC 1 RJ-45 Connector	Connect ¹ to the CAT 5 socket on the rear of the SV-301 (DDC option)
35	DDC 2 RJ-45 Connector	Connect ¹ to the CAT 5 socket on the rear of the SV-301 (DDC option)
36	DDC 3 RJ-45 Connector	Connect ¹ to the CAT 5 socket on the rear of the SV-301 (DDC option)
37	<i>12V DC</i>	+12V DC connector for powering the unit
38	<i>FIRMWARE UPGRADE</i> Switch	For technical support use only
39	FACTORY RESET Button	Reset the system to its default setup

4.1 DDC Support

When establishing a VGA connection between a PC or laptop and a display device, a set of parameters known as EDID is exchanged between them, which is carried over the DDC channel. In some PC graphic cards and laptops, this information exchange is essential for proper VGA OUT operation.

When the **SV-551** is connected to the **SV-301** with two STP cables it supports DDC communication between the connected PC or laptop and the Display device used, thus ensuring trouble free VGA transmission.

For proper operation of the DDC support, select the appropriate PC IN channel of the **SV-551** before turning on the VGA OUT of your laptop.

¹ Connect to the DDC for the transfer of specification data from the display device to the source properties, such as maximum resolution and color depth. The video card can then use this information to ensure that the user is presented with valid options for configuring the display

PART III Detailed Installation Instructions

PART III covers these topics: installing the Wall Plates, the Ceiling Speakers, the **SV 2** Ceiling Platform and Projector Bracket, and the **SV 551**.

We recommend that after deciding where you want to install the screen and the projector, you install in this order, the:

1. Cables and wires.
2. Room Controller and the wall plates (see section 5).
3. Ceiling speakers (see section 6).
4. **SV-2** Ceiling Platform and the **SV-CL** Column (see section 7).
5. **SV-551** switcher inside the **SV-1** (see section 8).
6. Projector Bracket (see section 9).

5 Installing the Room Controller(s) and the Wall Plates

This section explains how to install the room controller(s) and the wall plates.

5.1 Defining the RC-63DL Room Controller

This section defines the default Kramer *SummitView*TM **RC-63DL** room controller, which is included as part of the *SummitView*TM **ESSENTIALS KIT** and the *SummitView*TM **STANDARD KIT**.

The **RC-62** and **RC-63A** are also available for additional purchase (optional). Refer to the separate user manual: **RC-62, RC-63A and RC-63D Series**¹. Note, that each *SummitView*TM kit comes with the appropriate set of cables included. For full details, see Table 14.

Each room controller can be used as:

- A system controller for the *SummitView*TM system when connected via K-NET cable to the **SV-551** *SummitView*TM *Processor / Switcher*. When used in this way no programming of the room controller is needed
- An advanced, standalone, wall-mounted room controller. When used in this way programming of the room controller is required²

¹ It includes these models: RC-62, RC-62P, RC-62L (the RC-62 Series); RC-63A, RC-63AL, RC-63AP (the RC-63A Series) and RC-63D, RC-63DL, RC-63DP (the RC-63D Series)

Download it at: <http://www.kramerelectronics.com>

² Refer to the separate online “RC-SV Configuration Guide” at <http://www.kramerelectronics.com>

The Kramer **RC-63DL** is a 2 Gang wall plate. It features 6 front panel buttons designed in 2 groups; 1 group of 2 buttons, and another group of 4 buttons. Each group can be programmed according to the user's requirements. LCD and plastic cap variations are available. It has a digital volume control adjustment knob with 5 LEDs.

The **RC-63DL** includes 2 relays for the simplified and centralized control of room functions (such as lighting, closing blinds, screen settings, and so on), an IR output, a bi-directional RS-232 port, and 2 K-NET ports. In addition, the **RC-63DL** features an IR-learner for the customized control of external sources, absorbing the IR commands from different remote transmitters. A USB port is included for programming the **RC-63DL** via a computer. Table 3 defines the **RC-63DL**.

Table 3: Defining the RC-63DL¹

#	Feature	Function
1	SOURCE Buttons	These 4 configurable backlit buttons can set up any supported command (see section 11.1)
	"SOURCES" is printed on the panel, or it is left blank to affix your own label (see Figure 43 in section 11), or an LCD version on a blue background is available that displays up to 8 characters at once (programmed via the USB port) and includes rolling text	
2	DISPLAY Buttons	These 2 configurable backlit buttons can set up any supported command (see section 11.1)
	" DISPLAY " is printed on the panel, or it is left blank to affix your own label (see Figure 43 in section 11), or an LCD version on a blue background is available that displays up to 8 characters at once (programmed via the USB port) and includes rolling text	
3	VOLUME LED	Lights red, indicating maximum volume
4	VOLUME LEDs	Lights green, indicating volume level
5	VOLUME Knob	Rotate clockwise to increase the level

#	Feature	Function
1	FIRMWARE UPDATE Switch	For technical support use only
2	K-NET TERM Switch	For line termination
3	PROGRAM (USB) Connector	Connect to a computer for unit configuration
4	IR IN Receiver	Receives IR remote commands
5	RELAY Connections	Connect to room items (such as lighting, screen settings, blinds, and so on)
6	IR Connections	Control a machine via an IR Emitter
7	RS-232 Connections	Connect to the RS-232 connector on the A/V equipment or a PC or other Serial Controller
8	K-NET 2 Connections	On K-NET 1 and K-NET 2, PIN GND is for the Ground connection ² ; PIN B (-) and PIN A (+) are for RS-485, and PIN +12V is for powering the unit (K-NET is our proprietary protocol for interconnecting Kramer units)
9	K-NET 1 Connections	
10	FACTORY RESET Button	Press to revert to the default settings, including all the configured buttons
11	Grounding Screw	Connects to the grounding wire

1 For the US version. For the European version, see the RC-62, RC-63A and RC-63D Series user manual

2 The ground connection is sometimes connected to the shield of the RS-485 cable (in most applications, it is not connected)

5.2 Defining the SV-301 and SV-302 Wall Plates

The **SV-301** and **SV-302** are included as part of the *SummitView™ ESSENTIALS KIT* and the *SummitView™ STANDARD KIT*. Note, that each *SummitView™* kit comes with the appropriate set of cables included. For full details, see Table 14.

The **SV-303**, **SV-304** and **SV-305** are available for additional purchase (optional)¹. Sections 5.3 and 5.4 define the **SV-301** and **SV-302** for the United States and Europe, respectively.

STP cabling of 50' (15.24m)² in length is provided, see Table 14. When required, longer STP cabling can be used but we recommend a maximum transmission range of up to 100' (30.48m). Exceeding the recommended distance may result in reduced image quality. For the CAT 5 PINOUT, see section 12.



Advanced User Tip

The **SV-302** IR OUT port enables remote IR control (this requires the appropriate programming of the **SV-551**) over the source connected to it (a DVD player, a VHS player and so on).

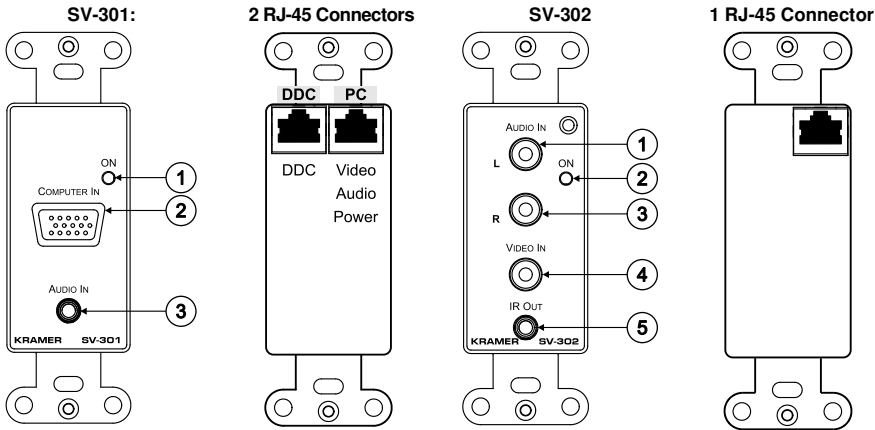
¹ Download the user manual: SV-301, SV-302, SV-303, SV-304, SV-305 at: <http://www.kramerelectronics.com>

² Plenum-rated for the SummitView™ US version; non-plenum for the SummitView™ Europe

5.3 SV-301 and SV-302 (for the United States)

Table 4 defines the front and rear views of the **SV-301** and **SV-302**:

Table 4: Defining the SV-301 and SV-302 (for the U.S.)



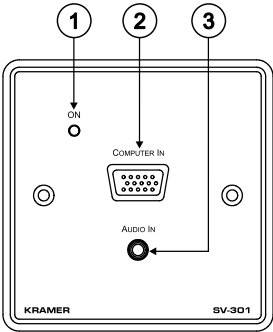
#	Feature	Function
1	ON LED	Lights in RED when receiving power (when no signal is detected); lights in GREEN when receiving a signal
2	COMPUTER IN 15-pin HD Connector	Connect to the computer graphics source
3	AUDIO IN 3.5mm Mini Plug	Connects to the audio source

#	Feature	Function
1	L AUDIO IN RCA Connector	Connect to the left analog audio source
2	ON LED	Lights in RED when receiving power (when no signal is detected); lights in GREEN when receiving a signal
3	R AUDIO IN RCA Connector	Connect to the right analog audio source
4	VIDEO IN RCA Connector	Connect to the composite video source
5	IR OUT 3.5mm Mini Plug	Connect to a machine via an IR Emitter

5.4 SV-301 and SV-302 (for Europe)¹

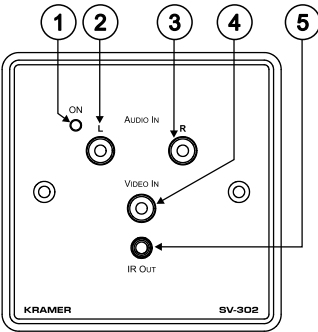
The **SV-301** and **SV-302** are 1 Gang wall plate inserts. The **SV-301** has two terminal block connectors at the rear and the **SV-302** has one.

Table 5: Defining the SV-301 (for England and Europe)²



#	Feature	Function
1	ON LED	Lights in RED when receiving power (when no signal is detected); lights in GREEN when receiving a signal
2	COMPUTER IN 15-pin HD Connector	Connect to the computer graphics source
3	AUDIO IN 3.5mm Mini Plug	Connects to the audio source

Table 6: Defining the SV-302 (for England and Europe)²



#	Feature	Function
1	ON LED	Lights in RED when receiving power (when no signal is detected); lights in GREEN when receiving a signal
2	L AUDIO IN RCA Connector	Connect to the left analog audio source
3	R AUDIO IN RCA Connector	Connect to the right analog audio source
4	VIDEO IN RCA Connector	Connect to the composite video source
5	IR OUT 3.5mm Mini Plug	Connect to a machine via an IR Emitter

1 The European versions are equipped with easy terminals, see section 12.2

2 When mounting in Belgium and Germany, use the standard WP Adapter

5.5 Connecting the Wall Plates

The wall plates should be connected to the corresponding inputs on the **SV-551** using the supplied or optional STP cables¹. The **SV-301** has two RJ-45 CAT 5 connectors (one for DDC and one for PC (Video/Audio/Power (US version))), as Table 4 defines, and comes with two STP cables. The **SV-302** has one RJ-45 CAT 5 connector (US version) and comes with one STP cable.

To connect the **SV-301**, as the example in Figure 3 illustrates (see also the separate color illustration referred to in section 3.2), do the following:

1. Connect the computer graphics source (for example, a laptop) to the Computer In 15-pin HD connector and to the unbalanced stereo Audio In 3.5mm mini jack on the front of the **SV-301**, for example, using a Kramer C-GMA/GMA cable (VGA HD15M +Audio jack to VGA HD15M +Audio jack)².
2. On the rear of the **SV-301**, connect the RJ-45 CAT 5 connector marked:
 - “DDC” to the DDC 1 INPUT on the **SV-551**
 - “PC” to the PC 1 INPUT on the **SV-551**

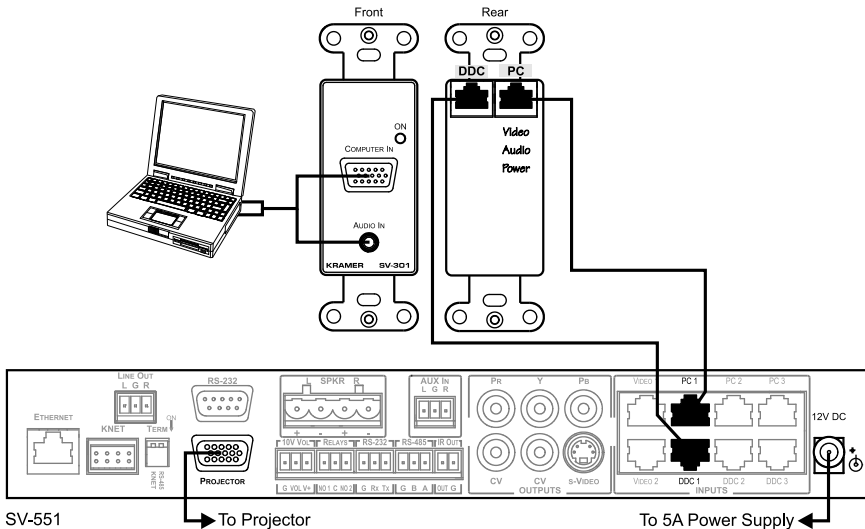


Figure 3: Connecting the SV-301 to the SV-551

1 There are two types of STP cable provided with SummitView™: CP-STP-50 (plenum-rated for the SummitView™ US) or C-STP-50 (non-plenum for the SummitView™ Europe). Other STP cables can also be used. However, when using longer STP cables, image quality can be impaired

2 Not supplied. The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

To connect the **SV-302**, as the example in Figure 4 illustrates, do the following:

1. On the front of the **SV-302**, connect the:
 - Composite video source (for example, a DVD player) to the yellow RCA connector, and to the unbalanced stereo audio RCA connectors
 - IR OUT 3.5mm mini plug via an IR Emitter¹ Control cable directly onto the IR sensor window of the controlled device (for example, a DVD player)
2. On the rear of the **SV-302**, connect the RJ-45 CAT 5 connector to the VIDEO 1 INPUT on the SV-551:

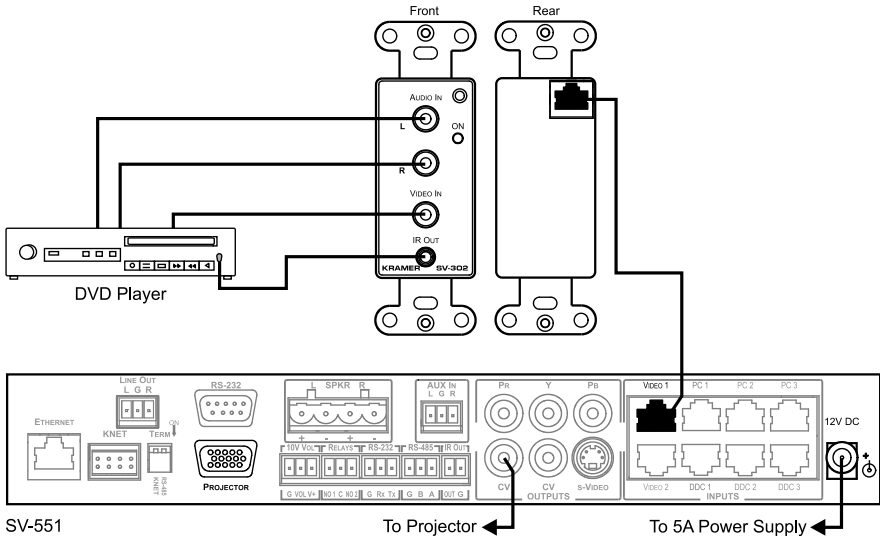


Figure 4: Connecting the SV-302 to the SV-551

¹ The Emitter contains a small infrared LED housed in a miniature, mouse shaped, black plastic shell. It emits visible red light in addition to IR (infrared) control signals when activated by IR commands sent to it by IR receivers or other controllers. The Emitter Control Cable comes with a clear adhesive film included on the emitter housing for attachment to the IR window of the controlled component and pieces of double-sided clear adhesive tape included for replacement purposes

In addition, you can connect the:

- **SV-303** (optional), which accepts an s-Video source on a 4p connector and unbalanced stereo audio on RCA connectors. The input signals are converted via an RJ-45 CAT 5 connector at the rear, and transmitted to the **SV-551**. The **SV-303** also has an IR out 3.5mm mini plug connector (connection to the **SV-551** is similar to the **SV-302**)
- **SV-304** (optional), which accepts a component video source on three RCA connectors, as well as a digital audio (S/PDIF) input on an RCA connector. The input signals are converted via an RJ-45 CAT 5 connector at the rear and transmitted to the **SV-551**. The **SV-304** also has an IR out 3.5mm mini plug connector as an option using a second RJ-45 connector (connection to the **SV-551** is similar to the **SV-301**. The second DDC STP cable is only needed when using the IR OUT connector of the **SV-304**)
- **SV-305** (optional), which accepts a component video source on three RCA connectors and unbalanced stereo audio on RCA connectors. The input signals are converted via an RJ-45 CAT 5 connector at the rear and transmitted to the **SV-551**. The **SV-305** also has an IR out 3.5mm mini plug connector as an option using a second RJ-45 connector (connection to the **SV-551** is similar to the **SV-301**. The second DDC STP cable is only needed when using the IR OUT connector of the **SV-305**)

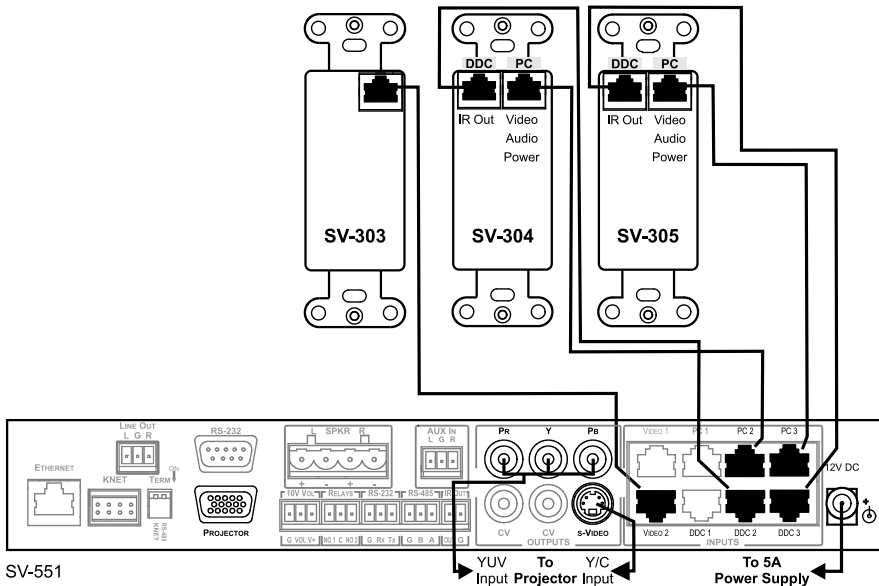


Figure 5: Connecting the SV-303 / SV-304 / SV-305 to the SV-551

6 Installing the Ceiling Speakers

The *SummitView*™ kits include ceiling speakers, but we also offer for sale separately, wall speakers and shelf speakers.

The type of speakers that you choose—for the ceiling, wall, shelf or floor—will depend on your budget and preferences. The quantity and spacing of the speakers will depend on the height of the ceiling, the size of the room, the seating arrangement and the acoustics in the room. For example, if the room is square-shaped we would recommend placing the speakers evenly to ensure an even sound coverage and ambient noise level compensation¹.

This section explains how to install the closed-back ceiling speakers, that is:

- Choosing the best place to locate your speakers (see section 6.1)
- Cutting the ceiling tile (see section 6.2)
- Installing the speakers (see section 6.3)
- Painting the speakers (see section 6.4)
- Connecting several speakers (see section 6.5)

6.1 Choosing the Best Location

Ideally, locate the speakers above the main listening area. Before doing so, be sure that:

- The desired location is free of obstructions, such as electrical piping, AC ducts or water lines, and so on
- There is enough space behind the mounting surface for the speakers
- The rear side of the speaker is not blocked by wall studs or other objects

6.2 Cutting the Ceiling Tile

If you are mounting the speakers onto a ceiling tile, remove the ceiling tiles where you plan to install the speakers. Use the template to trace and then cut out the speaker hole over an empty box.

To cut the ceiling tile, do the following:

1. Remove the circle in the supplied cardboard template².
2. Mark the opening in the correct location by tracing the hole in the template.

¹ In a small square-shaped room with four ceiling speakers each speaker would cover one-fourth of the listening area

² Keep this circular piece of cardboard for later use as a mask, as you may want to paint the speakers (see section 6.4)

3. Cut out the hole according to the template or with a circular cutter set to the appropriate cutout size¹.
4. Route the wiring from the SPKR terminal block connections of the **SV-551** (see Table 2) to the speakers' cutout holes, taking care not to place them next to electrical wires or at least at a distance of about two feet from an AC line.

6.3 Installing the Closed-back Ceiling Speakers

Figure 6 and Table 7 define the closed-back ceiling speakers:

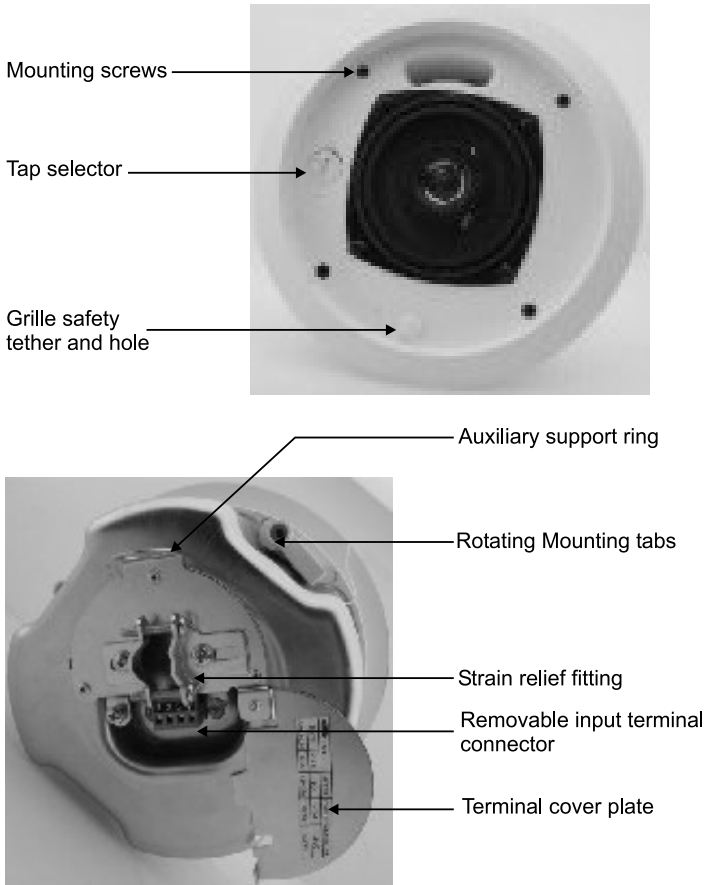


Figure 6: Closed-back Ceiling Speakers

¹ Initially, you can cut a smaller area inside the marked hole just to be sure that the space above the speakers is clear

Table 7: Closed-back Ceiling Speakers Hardware Items

Description		
A pair of ceiling speakers (one shown) 	Two grilles (one shown) 	Cutout template 
Four support ring screws 	Two ceiling support rings (C-ring) (one shown) 	Two pairs of tile rails – one of a pair shown 

Each closed-back ceiling speaker is supported by a C-ring¹. When mounting onto the ceiling tiles², use both supports. When mounting onto a sheetrock ceiling, the C-ring alone is used to reinforce the ceiling material.

To install the closed-back ceiling speakers, do the following:

1. Place the C-ring over the hole cut in the ceiling tile (on the “ceiling” side). Place it around the hole so that the tabs are located in parallel to the tile edges (see Figure 7).

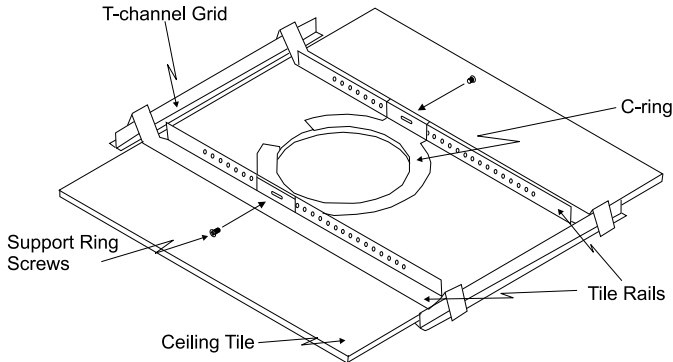


Figure 7: Installing the Closed-back Ceiling Speakers

¹ The tile rails prevent the speakers from falling if the tile itself comes out or falls apart, as their ends catch onto the T-grid

² Be sure that the tiles can support the speaker. Smaller sized tiles or fiberglass-type tiles cannot support the weight of the speakers. When this is the case, the speakers will need additional support

2. Place the tile rails on the tile and snap them into the two tabs on the C-ring.
Align the rails so that the ends extend over the T-channel grid.
3. Insert a screw through each tab on the C-ring to secure the rails.
4. Connect the speaker wires to the appropriate connector terminals¹ and screw the hold-down screws on the connector until tight.

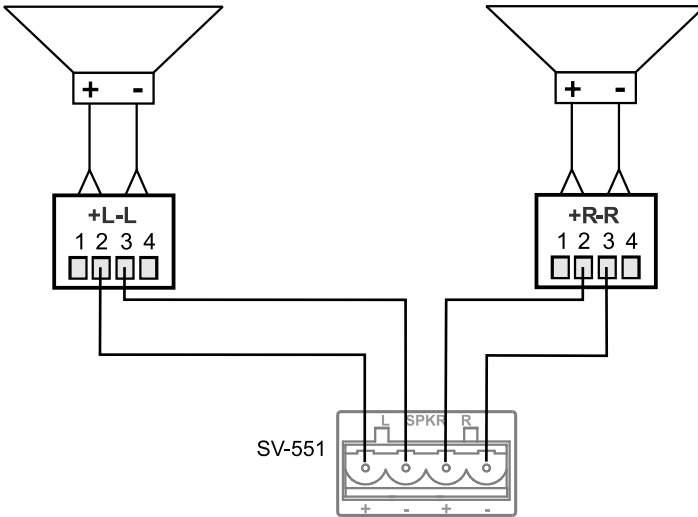


Figure 8: Wiring a Pair of Speakers to the SV-551

5. Plug the connector into the socket in the terminal cup of the speaker and tighten the screws (see Figure 9).
6. Loosen the horizontal screw and then the strain relief screws.
7. Run the wires through the opening in the fitting and plug the input connector into the terminal block connector of the speaker.

¹ PIN 1 and PIN 2 are connected internally and are positive (+). PIN 3 and PIN 4 are connected internally and are negative (-)

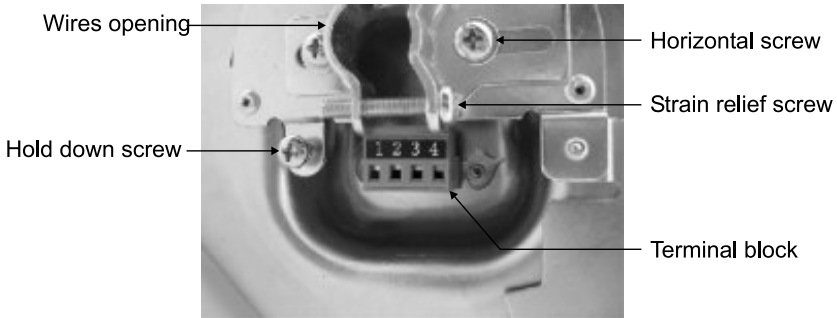


Figure 9: Plugging and Securing the Cables

8. Tighten the strain relief fitting, if plenum cable¹ is used:
 - Slide the wiring through the strain relief on the terminal cover plate
 - Hold the strain relief fitting tight around the cable
 - Tighten the strain relief screws first and then the horizontal screw²
9. Push the speaker into the ceiling hole until the front baffle rim is leveled with the ceiling.
10. Tighten the mounting tabs by turning the screw clockwise (see Figure 10).

When tightening the mounting tabs, the tabs automatically turn outward, thus clamping the speaker to the wall from its rear side.

Note: Do not over-tighten the screws. It may cause damage to both the speakers and the surface.

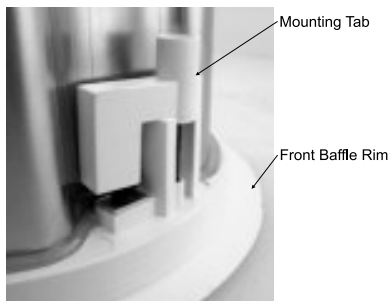


Figure 10: Tighten the Mounting Tabs

¹ If other types of cables are used, an alternate conduit fitting can be used by removing the existing fitting and replacing with an alternate one

² In cases of an insulated speaker wire and plenum cable, it is often possible to provide acceptable strain relief force simply by tightening the strain relief screws onto the terminal cover plate

11. If required, you can further secure the speaker by connecting the speaker support ring to an independent secure anchor point.
12. Adjust each speaker to the appropriate tap setting before installing the grille¹.
13. Install the grilles to the speakers:
 - Push the grille fastener into the hole in front of the baffle
 - Press the grille into place until the front of the grille is flush with the rim of the baffle
 - Check that the grille is securely seated²

6.4 Painting the Speaker

You can paint the speakers before or after the speaker is installed.

When painting before installation:

- Clean the rim and grille with mineral spirits or other light solvent so as not to damage the surface
- Spray with color by holding the spray can at an angle of 45°
Note: When spraying the grille, take care not to clog the holes in the grille as this will greatly reduce the sound quality of the speakers

When painting after installation:

- Use the circle that you cut out of the template as a paint mask
- After you finish painting, remove the paint mask

¹ In addition to the 4 ohm setting, the power taps are 30W, 15W, 7.5W and 3.7W at both 70.7V and 100V

² To remove the grille, insert two bent paper clips into the holes in the grille and carefully pull it down. Repeat this around the perimeter of the grille until it is completely removed

6.5 Connecting Several Speakers



Advanced User Tip

For installations in large rooms, when several speakers are used for each audio channel, you can connect the speakers in two possible layouts:

- **Wiring in parallel:** connect the wire pair of the next speaker to PIN 2 and PIN 3. When one speaker is removed, subsequent speakers will remain connected
- **Daisy-chaining:** connect the wire pair of the next speaker to PIN 1 and PIN 4. When one speaker is removed, subsequent speakers will be disconnected

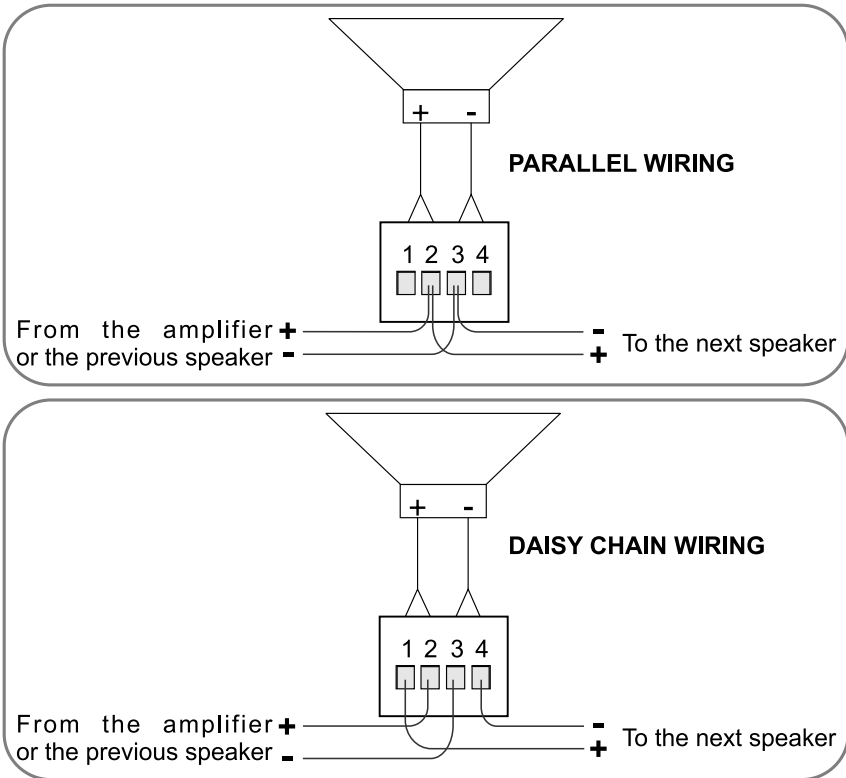


Figure 11: Closed-back Ceiling Speaker Schematic Diagram

6.5.1 Adjusting the Tap Selector

**Advanced User Tip**

Use the front mounted selector switch to select the required power level or impedance for your system.

We recommend that you select the power setting before installing the loudspeaker in the ceiling.

To select the required power level:

1. Remove the front grill from the loudspeaker.
2. Using a suitable flat blade screwdriver, select the required power rating or impedance for your installation by turning the selector until the required setting aligns with the arrow marks.

Settings for both 70V and 100V line are provided. The 4 Ohm setting should only be used on balanced installations.

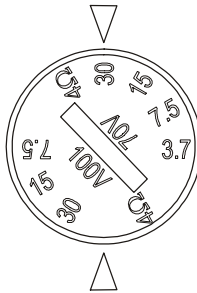


Figure 12: Adjust Tap Selector

7 Installing the SV-2 Ceiling Platform and the SV-CL Column

This section defines the:

- **SV-2** Ceiling Platform (see section 7.1)
- **SV-CL** Column (see section 7.2)

7.1 Defining the SV-2 Ceiling Platform

Figure 13 and Table 8 define the **SV-2** Ceiling Platform:

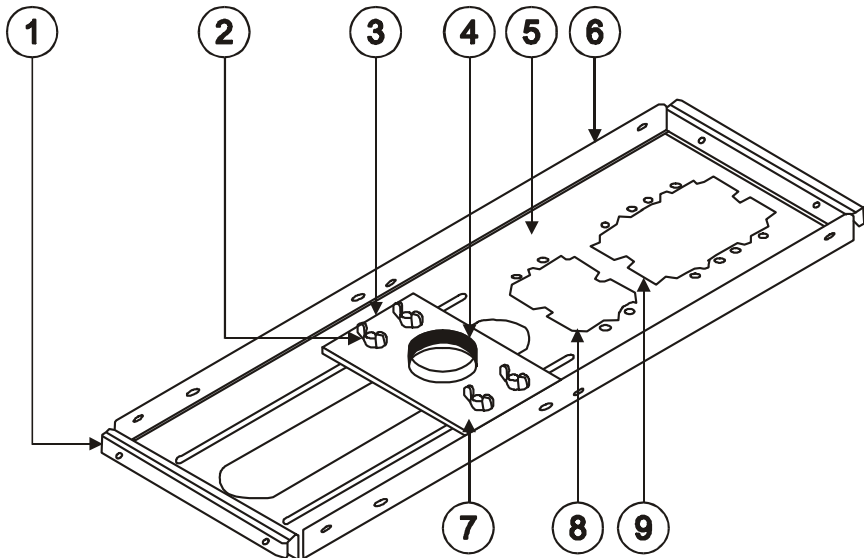


Figure 13: SV-2 Ceiling Platform

Table 8: SV-2 Ceiling Platform Features

#	Feature	Function	
1	End Brackets (2)	Place over rails of ceiling framework on both sides of SV-2 Ceiling Platform	
2	SV-CL Column Support Wing Nuts (4)	Tighten to fix the position of the column support unit over the column extension hole in the ceiling tile	
3	Column Support Unit	Supports the projector column	
4	SV-CL Column Opening	Insert the SV-CL Column through this opening	
5	Ceiling Tray	Main body of the SV-2 Ceiling Platform	
6	Support holes (4)	Tie to support point in ceiling structure, using a support cable	
7	Column Support Sliding Plate	Slide to fit to projector ceiling hole	
8	One-gang Power Outlet Opening	Support a 1-gang unit (optional)	If used, cut out additional holes to fit the openings on the ceiling tray
9	Two-gang Power Outlet Opening	Support a 2-gang unit (optional)	

7.2 Defining the SV-CL Column

Figure 14 and Table 9 define the **SV-CL** Column:

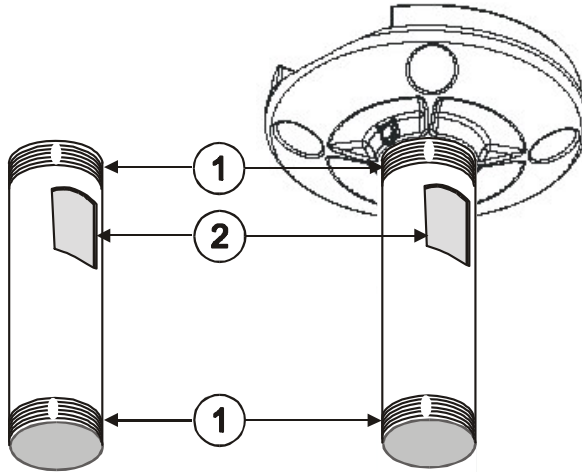


Figure 14: SV-CL Column

Table 9: SV-CL Column Features

#	Feature	Function
1	Thread	Screw one end to the extension ceiling opening in the SV-2 Ceiling Platform (first illustration in Figure 14), or into the plate/adaptor (second illustration in Figure 14), and the other to the projector bracket
2	Cable Access Opening	Use to access cables from ceiling kit to projector via the SV-CL Column

7.3 Attaching the SV-2 Ceiling Platform to the Ceiling

This section describes how to attach the **SV-2** Ceiling Platform to the ceiling.

7.3.1 Attaching the SV-2 Ceiling Platform to the Ceiling (Part 1)

To attach the **SV-2** Ceiling Platform to the ceiling, do the following:

1. Mark the location of the **SV-CL** Column on the ceiling tile with a pencil.
2. Remove the ceiling tile where you marked the location of the column and also remove adjacent tiles, if required.
3. Insert the center of the tip tool (provided, see Figure 15) into the marked location, and cut out the column opening by twisting the tip tool back and forth, thus creating a hole.

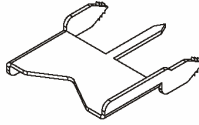


Figure 15: The Tip Tool

4. Place the ceiling kit over the ceiling tile.
5. Reinstall the ceiling tile
6. Check that the end brackets are seated over the rails of the ceiling framework.
7. Loosen the four **SV-CL** Column support wing nuts on the upper side of the tray (see Figure 16).
8. Slide the column support plate on the tray so that the projector opening fits the projector hole in the ceiling tile.
9. Tighten the four wing nuts.

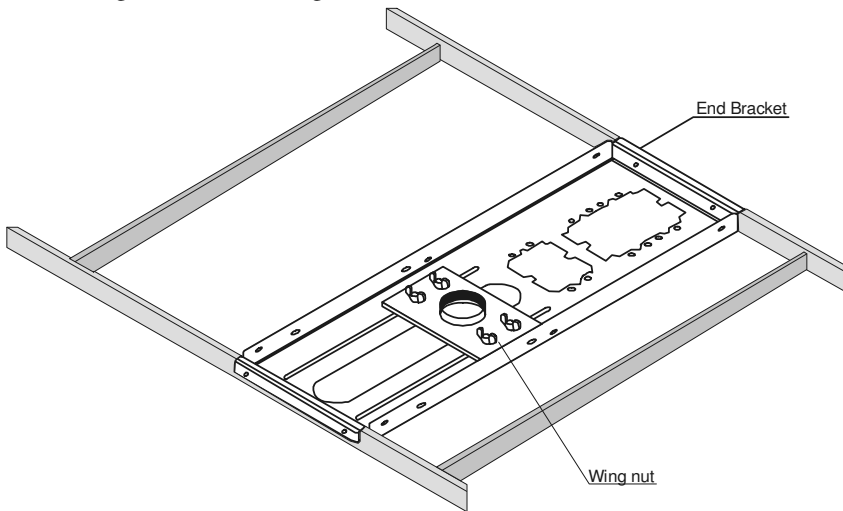


Figure 16: Installing the SV-2 Ceiling Platform

10. Search the ceiling structure for anchor support locations to which you can anchor the suspended **SV-2** Ceiling Platform.
The anchor support points should be located at an angle of at least 15° away from the tray. Mark the anchor locations with a pencil (see Figure 17).

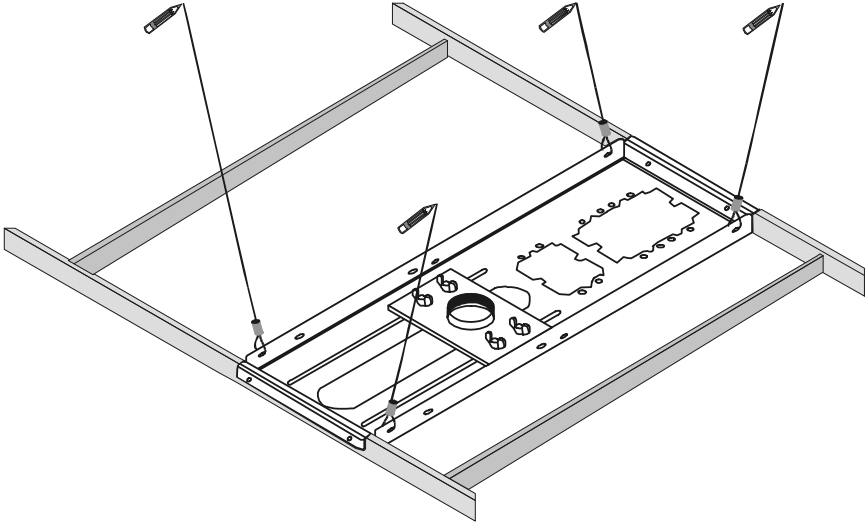


Figure 17: Marking the Anchoring Points

7.3.2 Installing the Support Cables to the Ceiling

You can install the support cables to three different types of ceiling: concrete, steel truss, or wooden:

To install the support cables on a **Concrete ceiling**, do the following:

- Note that installation into a hollow concrete block, or faulty concrete, may result in failure of the anchor and injury or damage to the equipment. Drill a 6.4mm (diameter) x 35mm (deep) hole at the marked cable support holes. Make sure that the hole is at least 64mm from nearest concrete edge
- Tap an anchor into each hole to a depth of at least 25mm
- Pull out each anchor approximately by 6.4mm, using the claw part of a hammer
- For each of the four anchors, insert the loop of the support cable through the hole of the anchor and pass the cable through the loop

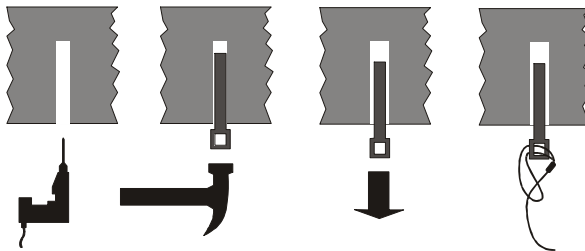


Figure 18: Anchoring to a Concrete Ceiling

To install the support cables on a **Steel Truss ceiling**, do the following:

- For each of the four anchoring points, insert the loop of the support cable over the truss and pass the cable through the loop

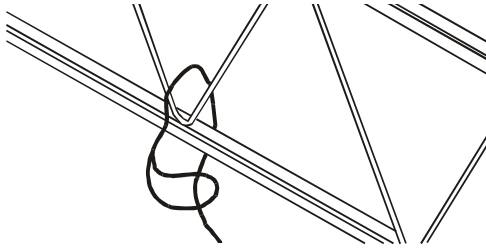


Figure 19: Anchoring to a Steel Truss Ceiling

To install the support cables on a **Wooden ceiling**, do the following:

- Drill a 4mm (diameter) x 51mm (deep) hole at the marked cable support holes
- Fully thread the eye lag into each hole
- For each of the four anchors, insert the loop of the support cable through the hole of the eye lag and pass the cable through the loop

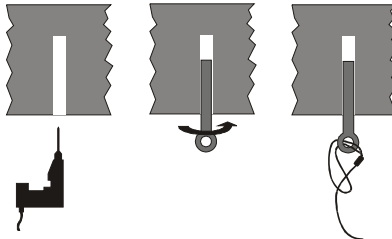


Figure 20: Anchoring to a Wooden Ceiling

This section describes how to attach the **SV-2** Ceiling Platform to the ceiling.

7.3.3 Attaching the SV-2 Ceiling Platform to the Ceiling (Part 2)

To continue to attach the **SV-2** Ceiling Platform to the ceiling, do the following:

1. Reinstall the ceiling tile.
2. Secure the tray bracket ends to the rails¹ of the ceiling framework using four screws (see Figure 21).

¹ Either from the inside of the ceiling tray or from the outside, depending on the tile size

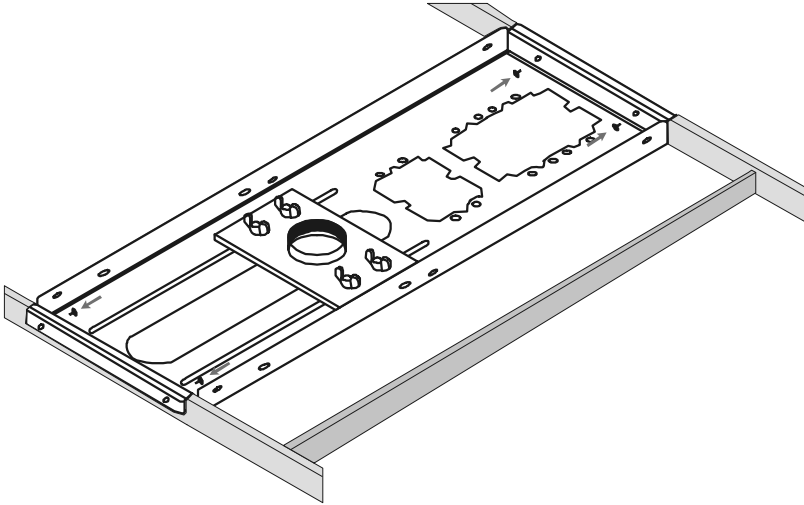


Figure 21: Securing Bracket Ends

3. For each of the four anchoring cables, thread the cable through the cable lock and the support hole and then again through the other side of the cable lock (see Figure 22).

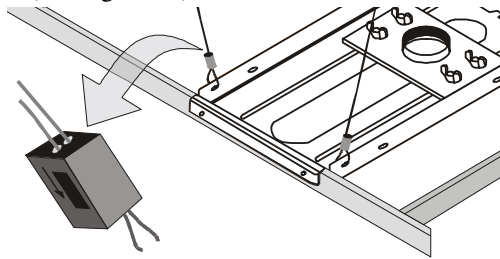


Figure 22: Securing the Support Cables

4. Adjust the cable tension until the tray is supported evenly by the four cables.
Do not tighten too much so as to distort the ceiling tile.
5. Install the **SV-CL** Column (see section 7.4).
6. Using a hex key, secure the **SV-CL** Column by firmly tightening either the screw or the security screw with a locking collar against the column (see Figure 23).

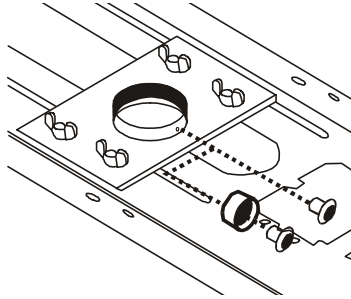


Figure 23: Securing the SV-CL Column

7. Install the finishing ring on the **SV-CL** Column below the ceiling tile. If it is necessary, bend the four tabs on the ring inward to secure the ring to the **SV-CL** column (see Figure 24).

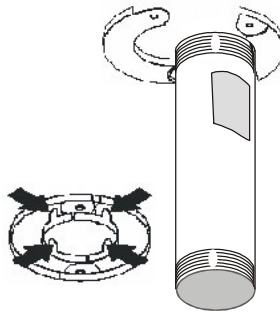


Figure 24: Installing the Finishing Ring

7.4 Inserting the SV-CL Column

To insert the **SV-CL** Column, as illustrated in Figure 25, do the following:

1. Pull in the cables from the ceiling tray through the column.
2. Screw the threaded end to the projector opening in the ceiling tray.
Make sure that the column is engaged at least four full threads into the projector opening¹.
3. Make sure that the cable access opening is positioned as required (facing the direction of the power connector).

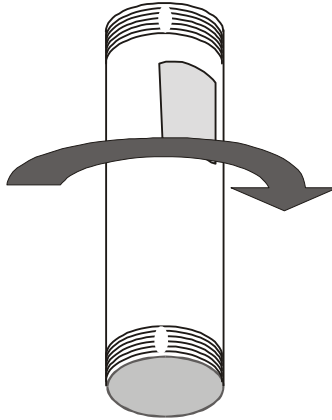


Figure 25: Installing the SV-CL Column

¹ You can also install the SV-CL Column upside down, to have the cable access opening close to the lower side of the column

8 Installing the SV-551 Switcher inside the SV-1

The **SV-1** housing unit is designed specifically to house the **SV-551 SummitView™ Processor / Switcher** (defined in section 4) together with the power supply and cables. This section defines:

- How to connect the **SV-551**, see section 8.1
- The **SV-1** Housing Unit and how to install the **SV-551** inside the **SV-1**, see section 8.2
- How to install the **SV-551** on a 19" rack, see section 8.3

8.1 Connecting the SV-551 SummitView™ Processor / Switcher

Figure 26 explains how to connect the **SV-551**, and Figure 27 illustrates how to wire the K-NET connector:

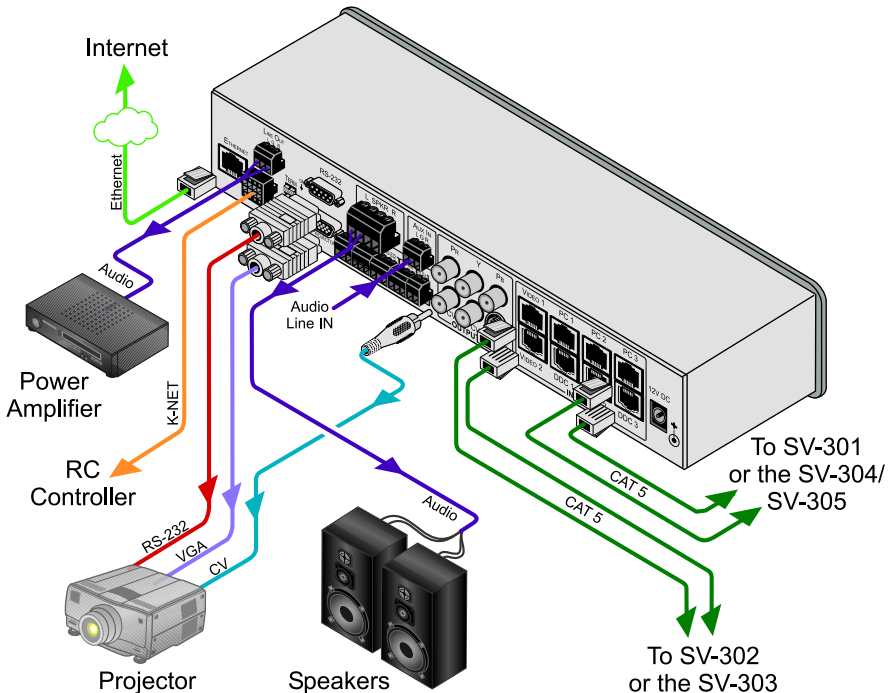


Figure 26: SV-551 SummitView™ Processor / Switcher Connections

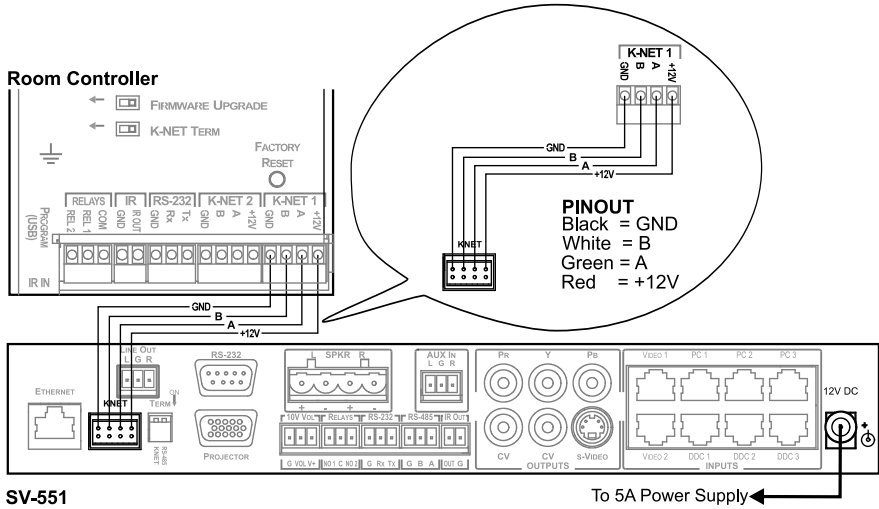


Figure 27: Wiring the K-NET Connector

8.2 Installing the SV-551 inside the SV-1

Section 8.2.1 defines the **SV-1** housing unit, and section 8.2.2 defines how to install the **SV-1**.

8.2.1 Defining the SV-1 Housing Unit

Figure 28, Figure 29, Figure 30 and Table 10 define the **SV-1**:

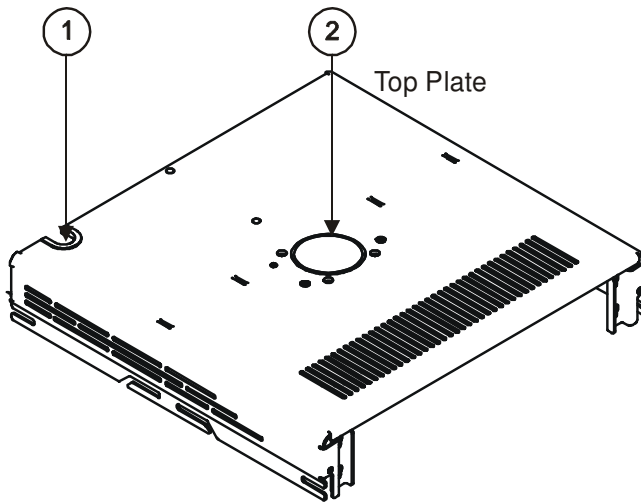


Figure 28: SV-1 Housing Unit (Top Plate)

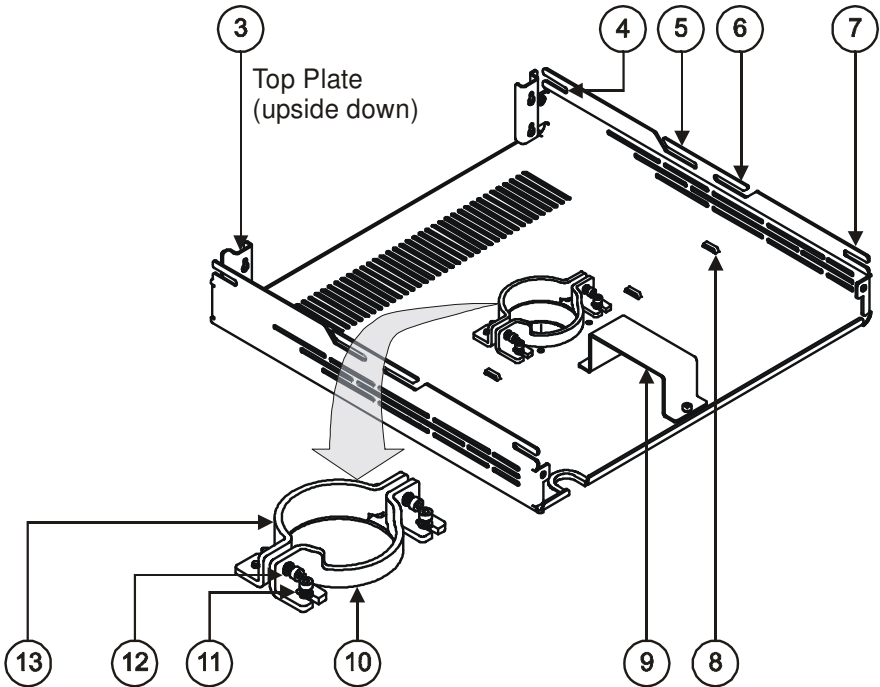


Figure 29: SV-1 Housing Unit (Top Plate Rotated 180°)

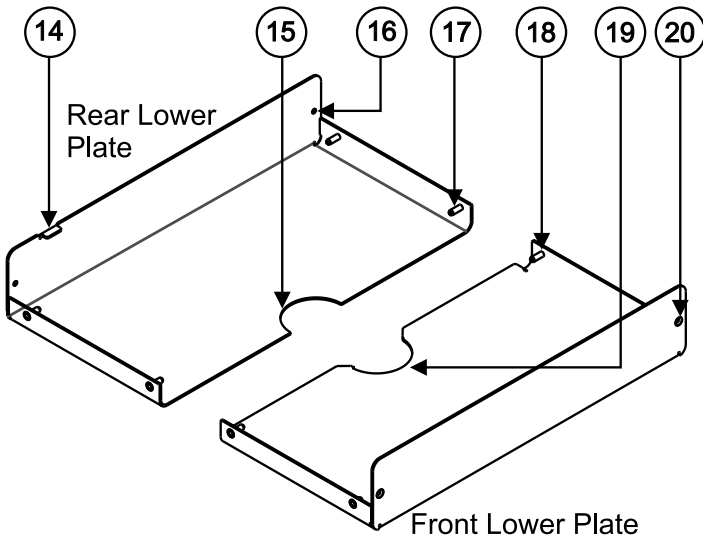


Figure 30: SV-1 Housing Unit (Lower Plate)

Installing the SV-551 Switcher inside the SV-1

Table 10: SV-1 Housing Unit Features Features

#	Feature		Function
1	Power Cables Opening		For passing through the power cables
2	SV-CL Column Opening		For inserting the SV-CL Column
3	Switcher Attachment Slots		Slide the four front screws of the switcher into these slots
4	Rear Sliding Rails A		Slide the rear lower plate into place
5	Rear Sliding Rails B		Slide the rear lower plate into place
6	Front Sliding Rails A		Slide the front lower plate into place
7	Front Sliding Rails B		Slide the front lower plate into place
8	Cable Notches		Insert a plastic restraint through the notches to tie the cables together
9	Power Supply Support		Attach the power supply ¹ to the SV-1
10	SV-CL Column Support Ring	Movable part	Attach to the fixed ring part
11		Fixing screws	Fix movable ring part to top SV-1 plate
12		Attachment Screws	Attach to fixed ring part
13		Fixed part	Press against the support column
14	Power Cable Lip		Holds the power cables in the power opening
15	SV-CL Column Opening		For inserting the SV-CL Column
16	Rear Fastening Screws (2)		Tighten to attach the rear lower plate to the top plate
17	Rear Sliding PINs (4)		Slide into rear sliding rails
18	Front Sliding PINs (4)		Slide into front sliding rails
19	SV-CL Column Opening		Pass SV-CL Column through
20	Front Fastening Screws (2)		Tighten to attach the front lower plate to the top plate

¹ The power outlets are left empty, deliberately. A qualified electrician is required to install the power connectors

8.2.2 Installing the SV-1

To install the **SV-1**, do the following:

1. Dismantle the **SV-1** box by releasing the four screws on the sides (two on each side), as Figure 31 illustrates:

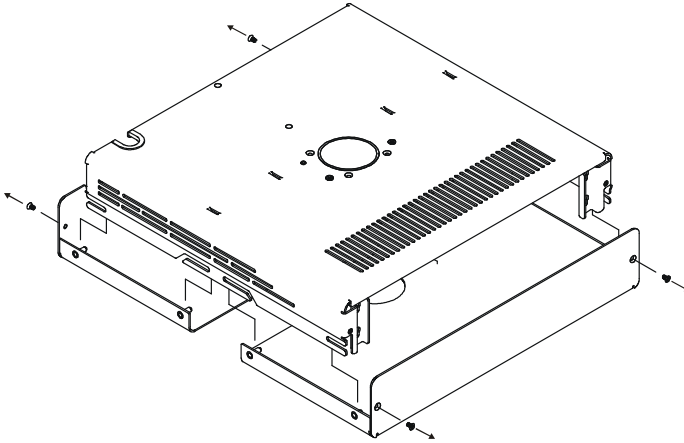


Figure 31: Dismantling the SV-1

2. Attach the switcher power supply¹, as Figure 32 illustrates:
 - Turn the top plate upside down
 - Release the two screws of the power supply support
 - Slide the power supply under the power supply support, located on the top side of the **SV-1** box and tighten the screws

¹ The power outlets are left empty, deliberately. A qualified electrician is required to install the power inserts

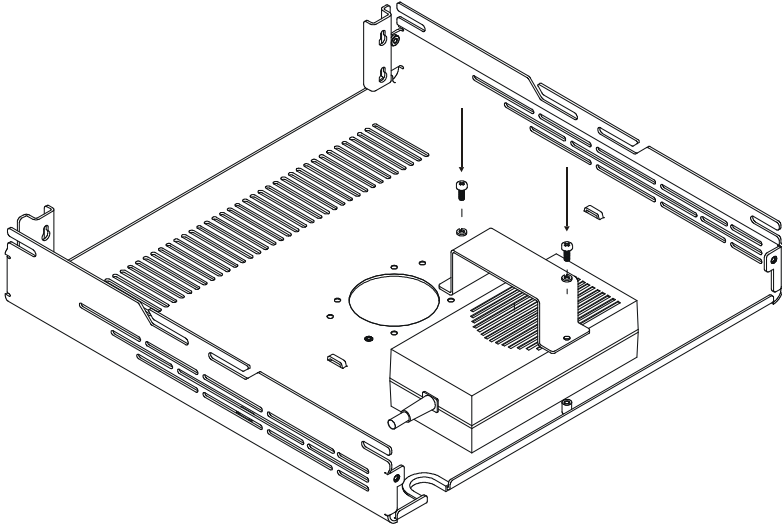


Figure 32: Attaching the Power Supply

3. Connect the top side of the **SV-1** to the **SV-CL** Column¹, as Figure 33 illustrates:
 - Press the fixed part of the support ring against the **SV-CL** Column²
 - Attach the mobile part of the support ring to the fixed part and tighten the tightening screws until the **SV-CL** Column supports the top side of the box
 - Tighten the fixing screws to secure the mobile part of the ring to the top side of the **SV-1**

¹ The top side is connected so that the power supply unit will be connected on its rear side. The switcher must face the same direction that the projector faces

² The fixed part must be aligned with the upper part of the cable access opening on the SV-CL Column

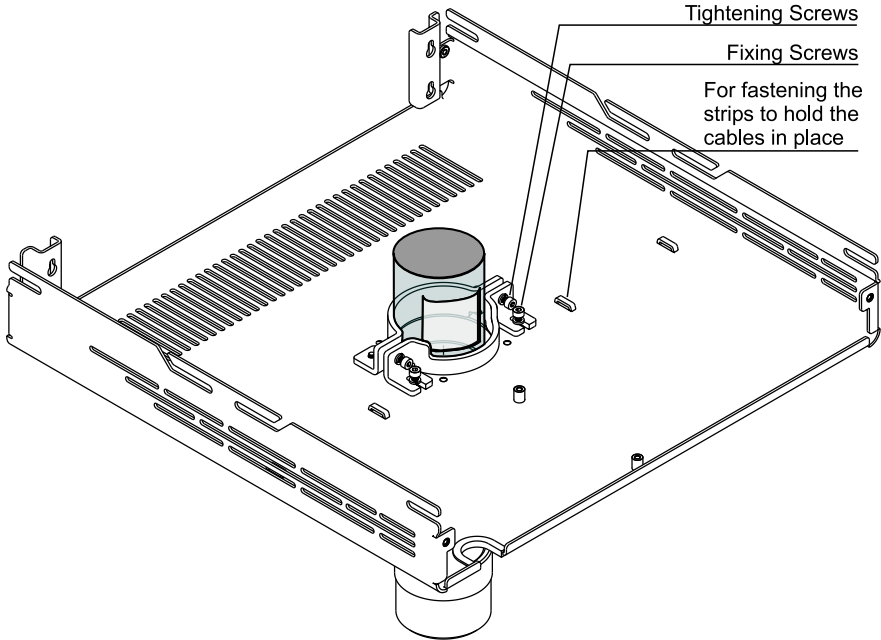


Figure 33: Connecting to the SV-CL Column (Viewed Upside Down)

4. Pass all the required cables through the **SV-CL** Column¹, as Figure 34 illustrates:
Note, that the length of the **SV-CL** Column that protrudes between the ceiling and the top of the **SV-1** depends on the type of ceiling (see section 7.3.2). For example, a greater length is required when the ceiling is made of concrete.

¹ Including all the cables for the wall plates, the speakers and the projector, but not including the power cables

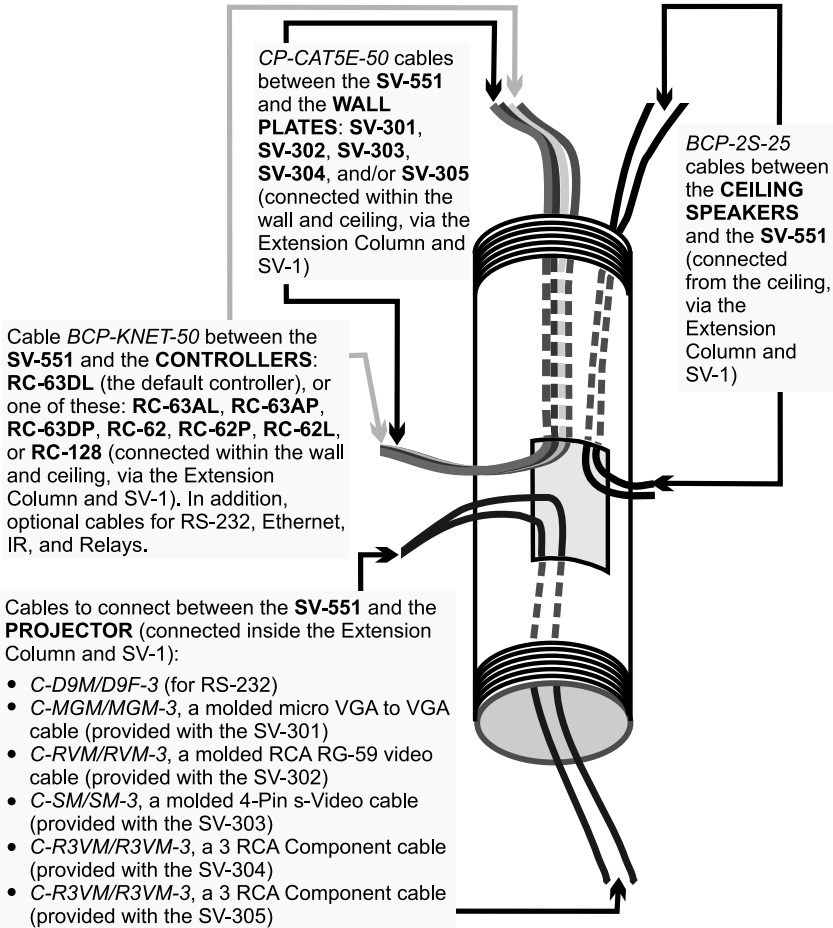


Figure 34: Connecting the Cables through the SV-CL Column

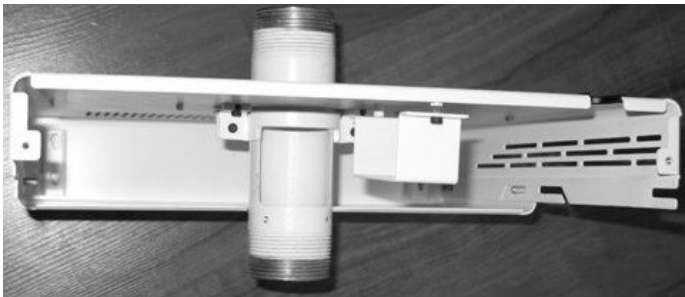


Figure 35: Photo showing the SV-CL Column with the Opening inside the SV-1

5. Loosen the four front switcher screws of the **SV-551** switcher half way¹.
6. Connect all the required inputs and outputs to the switcher.
7. Slide the four half-way-open screws (of the **SV-551**) onto the four front switcher support slots located on the top side of the **SV-1** facing towards the front of the room.
8. Tighten the four screws to fix the switcher to the **SV-1**, as Figure 36 illustrates:

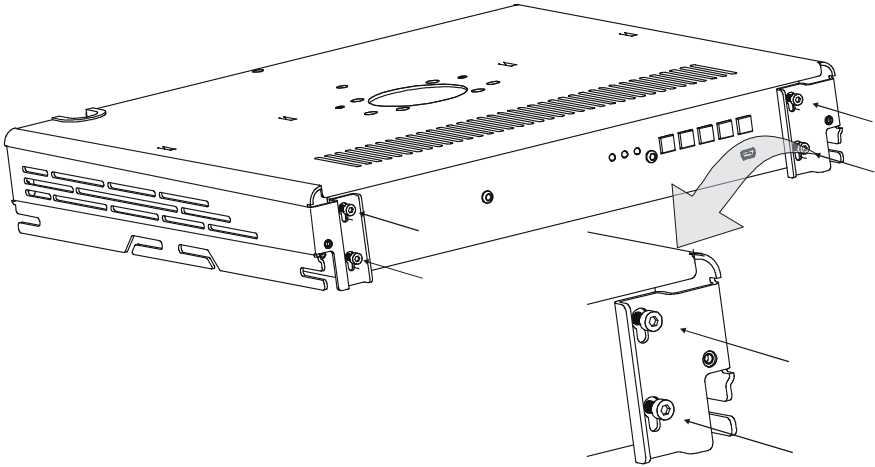


Figure 36: Installing the Switcher

9. If required, use a plastic restraint and the available four notches on the inside of the **SV-1** top side to secure the switcher cables.
10. Slide the rear side² of the lower part of the **SV-1** and fasten the two rear side-screws.
Make sure that the power cable is inserted to the power cables opening.
11. Slide the front side of the lower part of the **SV-1** and fasten the two front side-screws.

¹ For easy installation of the switcher to the SV-1 at a later stage

² This part can be opened independently for maintenance

8.3 Installing the SV-551 in a 19" RK-551 Rack (Option)

This section describes what to do before installing the **SV-551** in a 19" rack (as opposed to inside the **SV-1**) and how to rack mount.

Before Installing in a Rack

Before installing on a rack, be sure that the environment is within the recommended range:	
Operating temperature range	+5 to +45 Deg. Centigrade
Operating humidity range	10 to 90% RHL, non-condensing
Storage temperature range	-20 to +70 Deg. Centigrade
Storage humidity range	5 to 95% RHL, non-condensing



CAUTION!!

When installing in a 19" rack, avoid hazards by taking care that:

- 1 It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.
- 2 Once rack mounted, enough air will still flow around the machine.
- 3 The machine is placed straight in the correct horizontal position.
- 4 You do not overload the circuit(s). When connecting the machine to the supply circuit, overloading the circuits might have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.
- 5 The machine is earthed (grounded) in a reliable way and is connected only to an electricity socket with grounding. Pay particular attention to situations where electricity is supplied indirectly (when the power cord is not plugged directly into the socket in the wall), for example, when using an extension cable or a power strip, and that you use only the power cord that is supplied with the machine.

How to Rack Mount

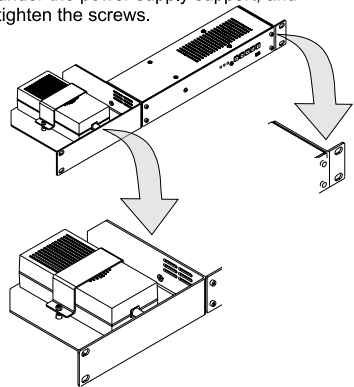
To rack-mount a machine (RK-551):

1. Attach the short ear bracket to the right side of the SV-551. To do so:

- (i). Remove the screws from the right side of the SV-551.
- (ii). Replace those screws through the short ear bracket.

2. Attach the long ear bracket with the power supply to the left side of the SV-551. To do so:

- (i). Remove the screws from the left side of the SV-551.
- (ii). Replace those screws through the long ear bracket.
- (iii). Release the two screws of the power supply support, and slide the power supply under the power supply support, and tighten the screws.



3. Place the ears of the machine against the rack rails, and insert the proper screws (not provided) through each of the four holes in the rack ears.

Note that:

- Detachable rack ears can be removed for desktop use or when installing in the **SV-1**
- Always mount the machine in the rack before you attach any cables or connect the machine to the power

9 Installing the SV-2 Projector Bracket

The **SV-2** Projector Bracket lets you align the projector exactly. The projector can be shifted around on the mounting plate until its weight is centered and balanced. The **SV-2** Projector Bracket includes adjustable legs and feet, which can be moved to any angle, depending on the mounting-hole pattern on the projector. Leg and foot length, width, and height can readily be adjusted.

9.1 Defining the SV-2 Projector Bracket

Figure 37 and Table 11 define the **SV-2** Projector Bracket:

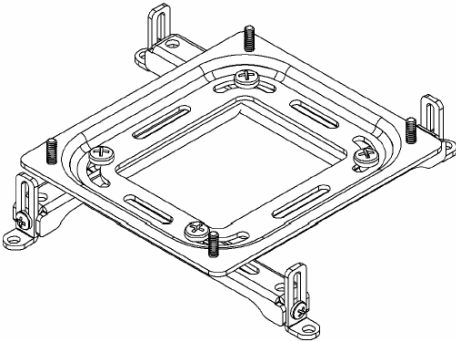


Figure 37: SV-2 Projector Bracket

Table 11: SV-2 Projector Bracket Items (four of each)

Description			
M6 x 12mm Phillips Pan Head Screw (used with M6 Flat Washers)		M2.5 x 10mm Phillips Pan Head Screw (used with M4 Flat Washers)	
M5 x 12mm Phillips Pan Head Screw (used with M6 Flat Washers)		M6 Flat Washer Used with screws M6 and M5	
M4 x 10mm Phillips Pan Head Screw (used with M4 Flat Washers)		M4 Flat Washer Used with screws M4 and M3	
M3 x 10mm Phillips Pan Head Screw (used with M4 Flat Washers)		10-24 Thumb Nuts 4	

9.2 Installing the SV-2 Projector Bracket

To install the **SV-2** Projector Bracket, do the following:

1. Measure the width and length between the mounting holes on your projector and save this data for later use. Projectors do not come with a standard mounting-hole pattern, but many have three or four holes (see Figure 38 and Figure 39).

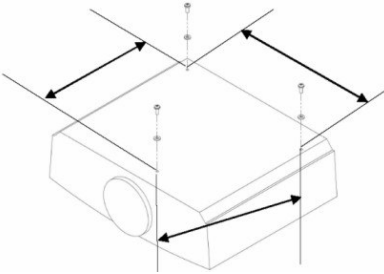


Figure 38: 3-Hole Projector

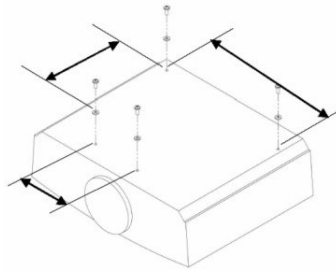


Figure 39: 4-Hole Projector

2. Adjust the legs on the bracket, as required. The **SV-2** Projector Bracket is designed to fit the mounting-hole pattern on most projectors, as long as the adjustable legs can be configured to match the mounting holes on your projector. For example, to align the **SV-2** Projector Bracket on a projector with 4 mounting holes, do this:
 - Locate the four mounting holes on your projector and use a Phillips screwdriver to loosen the four screws. Do not remove the screws
 - Use the data recorded in step 1 to help align the adjustable legs with the mounting-hole pattern on the projector
 - Place the **SV-2** Projector Bracket on your projector, adjust the legs as required, aligning the adjustable legs with the mounting holes on your projector
 - Attach the **SV-2** Projector Bracket to your projector, by selecting the screw size that fits the threaded inserts on your projector, and the washer that fits the selected screw. Attach the **SV-2** Projector Bracket to the projector using the selected fasteners, as defined in Table 11 and attach the **SV-2** Projector Bracket to the projector mount (see Figure 40)

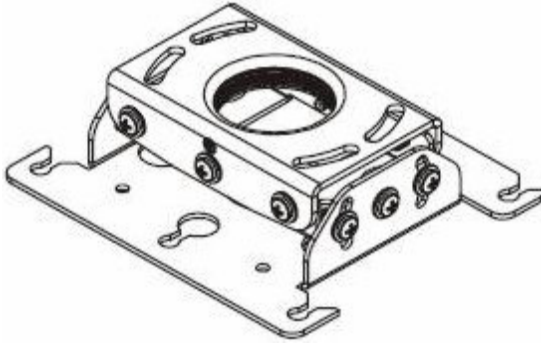


Figure 40: Projector Mount

3. Adjust the foot height on the bracket.
4. Position the **SV-2** Projector Bracket on the projector.

PART IV Further information

PART IV includes further information.

10 ADA Requirements

Attention must be paid to overhead clearances. Refer to the ADA Standards for Accessible Design (courtesy of the U.S. Department of Justice)¹, and in particular, section 4-4", "Head Room":

¹ You can download the file from their Web site at: <http://www.ada.gov/stdspdf.htm>

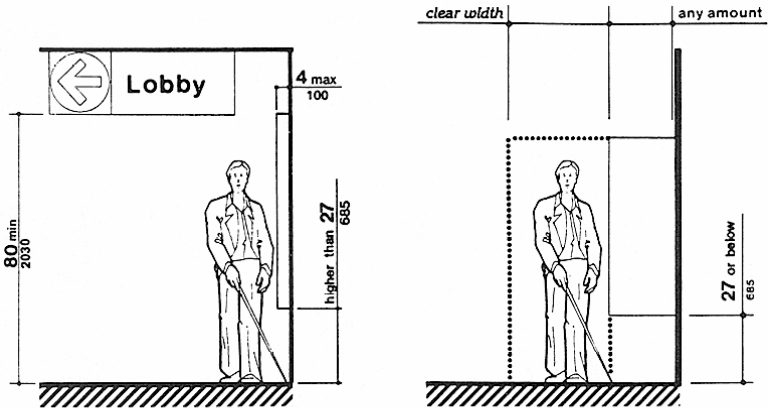
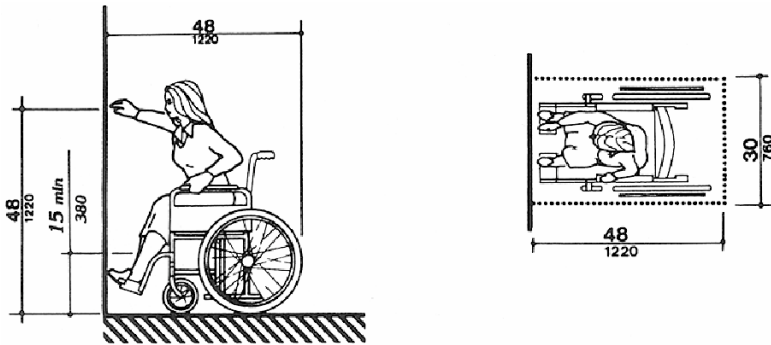
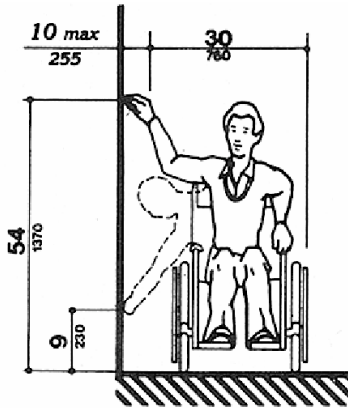


Fig. 8 (a)
Walking Parallel to a Wall

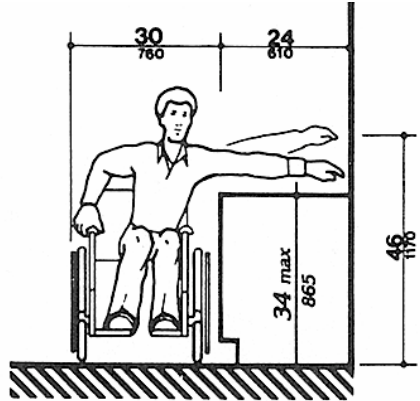
Figure 41: Overhead and Side Clearance Requirements



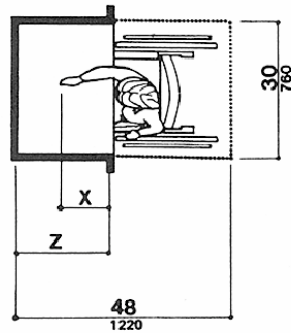
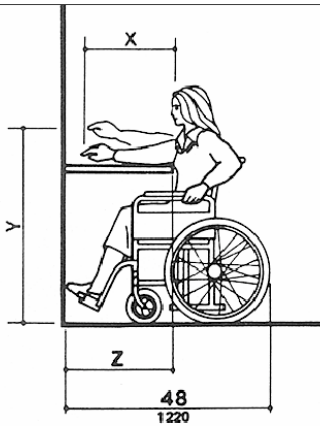
(a)
High Forward Reach Limit



(b)
High and Low Side Reach Limits



(c)
Maximum Side Reach over Obstruction



NOTE: x shall be ≤ 25 in (635 mm); z shall be $\geq x$. When x < 20 in (510 mm), then y shall be 48 in (1220 mm) maximum. When x is 20 to 25 in (510 to 635 mm), then y shall be 44 in (1120 mm) maximum.

(b)
Maximum Forward Reach over an Obstruction

Fig. 5
Forward Reach

Figure 42: High/Low Forward, Side and Over Obstruction Reach Limit Requirements

11 Customizing the Controllers' Buttons and Labels

This section describes the backlit buttons and the button labels sheet.

11.1 Backlit Buttons

The **RC-63DL** backlit buttons¹ are available on plastic caps. To insert a label on a button—we recommend doing this before installing the controller, as it involves removing the face plate—unscrew the faceplate attachment screws, using a screwdriver, gently remove the transparent button cap with your fingers, and insert the label under the button cap. Replace the button cap with the label onto the button base.

11.2 Button Labels Sheet

Figure 43 illustrates the sample "Button Labels" sheet:

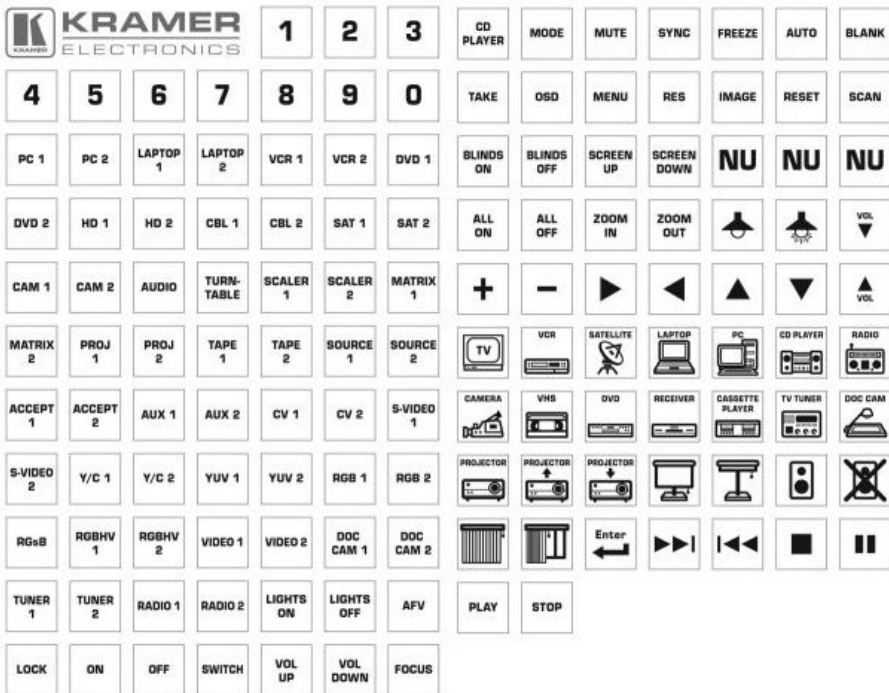


Figure 43: Sample "Button Labels" Sheet

¹ You can program the color of the button with flexible RGB values

12 Wiring the CAT 5 LINE IN / LINE OUT RJ-45 Connectors

STP cabling of 50' (15.24m)¹ in length is provided with the Kramer A/V *SummitView™ Standard Kit* and the *SummitView™ Essentials Kit*². When required, longer STP cabling can be used when purchased for stand alone wall plates but we recommend a maximum transmission range of up to 100' (30.48m). Exceeding the recommended distance may result in reduced image quality.

This section describes how to connect the rear panel for the:

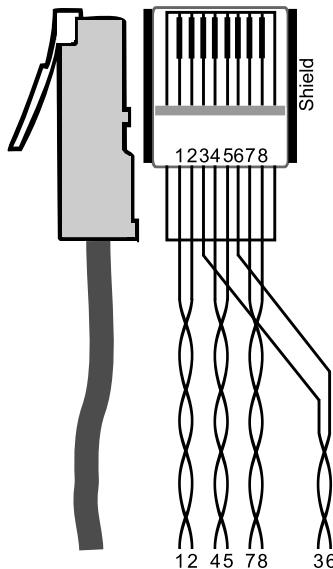
- US wall plate versions (see section 12.1)
- European wall plate versions (see section 12.2)

12.1 Wiring the CAT 5 RJ-45 Terminals (for the USA)

The US versions of the SV wall plates are equipped with RJ-45 terminals. Table 12 defines the STP CAT 5 PINOUT, using a straight pin to pin cable with RJ-45 connectors:

Table 12: CAT 5 PINOUT (for the USA)

EIA / TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown
Pair 1	4 and 5
Pair 2	1 and 2
Pair 3	3 and 6
Pair 4	7 and 8



¹ Plenum-rated for the SummitView™ US version; non-plenum for the SummitView™ Europe

² Or should be purchased separately for a standalone machine, see Table 14 for reference

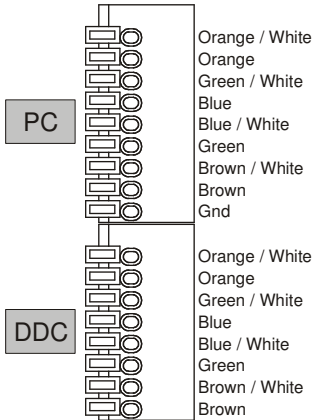
12.2 Wiring the Terminal Block Connector (for Europe)

The European versions are equipped with an easy plug-in terminal for the CAT 5 cables. Use the color coded sticker on these terminals for proper connection of the CAT 5 cable.

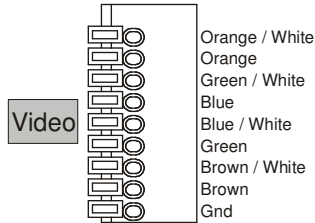
Table 13 defines the PINOUT of the terminal block connectors:

Table 13: Terminal block Connector PINOUT (for Europe)

SV-301, SV-304, SV-305 Rear Panel PINOUT



SV-302, SV-303 Rear Panel PINOUT



Notes:

- The “PC” section has 9 PINs; the “DDC” section has 8 PINs. Only use the connector clips to remove the wires, not when inserting them
- Each wire protrudes 9mm in length from the plastic casing so that it can be easily connected. To prevent the wires crossing, be sure that each wire is completely inserted
- With STP cable, the Gnd pin is used for shielding. For the DDC channel, shielding is not needed, but if desired, connect the GND pin of the PC

13 SummitView™ System Cables

Table 14 defines the cables included as part of the SummitView™ Kits:

Table 14: Cables included with the SummitView™ Kits

Item	Description
Cables to be used with the SV-301	
CP-STP-50 / C-STP-50 (2 cables) ¹⁾²	STP cable 50' (15.24m) from SV-301 to SV-551
Cables to be used with the SV-302	
CP-STP-50 / C-STP-50 (1 cable) ¹⁾²	STP cable 50' (15.24m) from SV-302 to SV-551
Cables to be used with the SV-551	
P.S 12V/5A DESKTOP with DC plug (1 cable)	
POWER CORD 110V (1 cable)	
C-MGM/MGM-3 (1 cable) ³	Molded Micro VGA to VGA cable 3' (0.91m), from SV-551 to the display device
C-RVM/RVM-3 (1 cable) ³	Molded RCA RG-59 video cable 3' (0.91m), from SV-551 to the display device
C-D9M/D9F-3 (1 cable)	RS-232 cable 3' (0.91m), from the SV-551 to the display device
BCP-2S-25 (2 cables)	Speakers' cables, from the SV-551 to the speakers
C-UA/MUB-3 (1 cable)	USBA to Mini USBB cable 3' (0.91m), for configuring the SV-551 or the RC-63DL
Cables to be used with the RC-63DL or another controller	
BCP-KNET-50 (1 cable)	Balanced Stereo Audio / Control cable 50' (15.24m), from the RC-63DL to the SV-551

1 There are two types of STP cable provided with SummitView™: CP-STP-50 (plenum-rated for the SummitView™ US) or C-STP-50 (non-plenum for the SummitView™ Europe)

2 Connect the Wall Plate to the SV-551

3 Connects the SV-551 to the projector

14 SummitView™ Cable Termination (Connector-to-Cable)

Table 14 defines the SummitView™ Cable Termination:

Table 15: SummitView™ Cable Termination

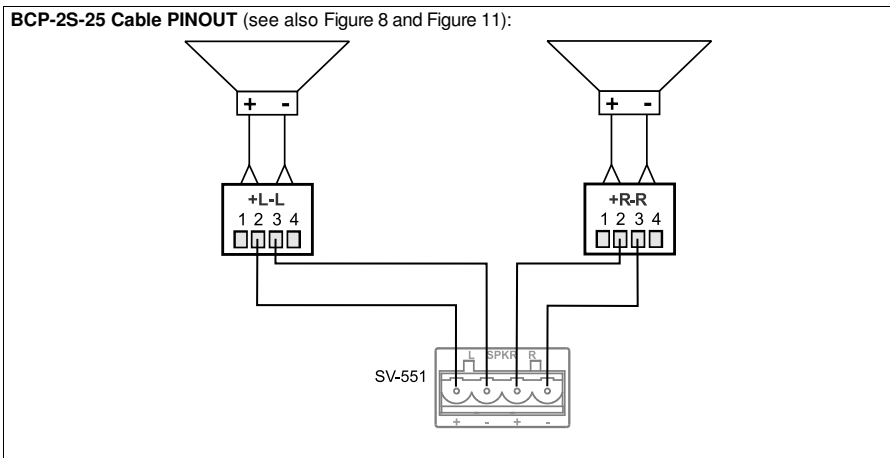
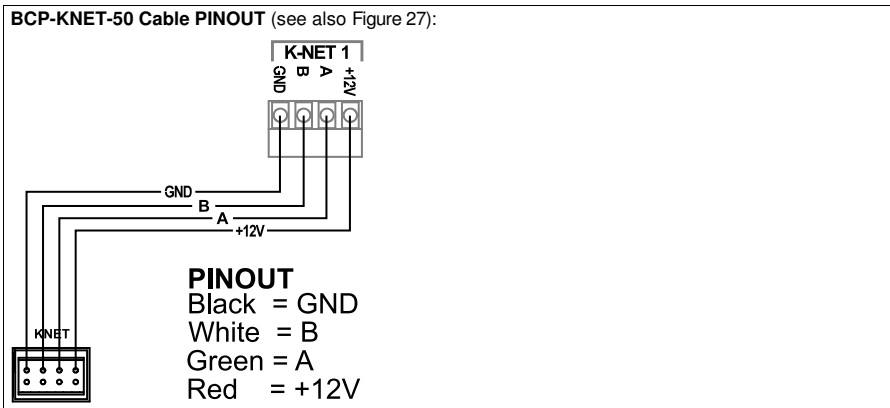
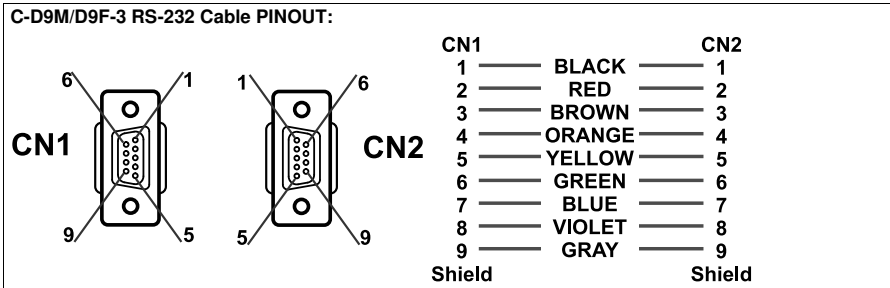


Figure 44 defines the stickers affixed to the *SummitView™ System* cables:

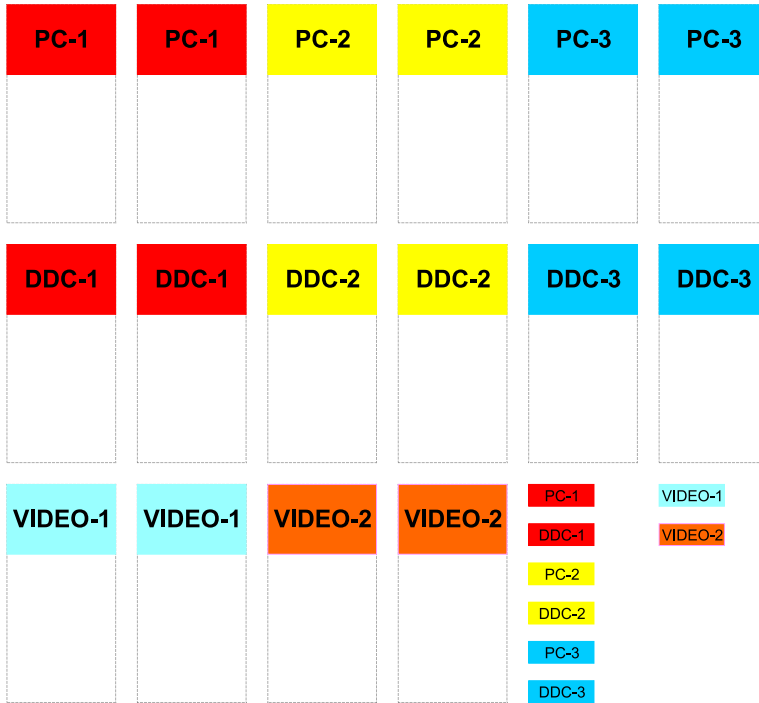


Figure 44: Stickers affixed to Cables

15 Technical Specifications

Table 16 includes the technical specifications of the **SV-551**.

Table 16: Technical Specifications¹ of the SV-551

INPUTS:	1 AUX stereo on a 3-PIN terminal block; 2 video (CV and Y/C), 3 PC (XGA and Y, Pb, Pr), 3 DDC (external display) on RJ-45 connectors	
OUTPUTS:	1 SPKR (speaker) stereo on a 4-PIN terminal block; 1 Projector (XGA) on a 15-PIN HD computer graphics video connector; 1 Y, Pb, Pr on 3 RCA connectors; 2 composite video on RCA connectors; 1 s-Video on a 4p connector; 3 DDC (bi-directional, inputs/outputs, as required) on RJ-45 connectors 10V Volume, 2 relays on terminal block connectors (36VAC or DC, 2A, 60VAC maximum on non-inductive load), RS-232, and RS-485 3-PIN terminal blocks; IR OUT 2-PIN terminal block	
MAX. OUTPUT LEVEL:	VIDEO: CV AND Y/C: 3.3Vpp; XGA and Y, Pb, Pr 1.4 to 2Vpp	AUDIO: 2 x 10W on 4Ω speaker
BANDWIDTH (-3dB):	VIDEO: CV AND Y/C: 82MHz to 86MHz; XGA and Y, Pb, Pr 130MHz to 140MHz	AUDIO: 20Hz to 20kHz
DIFF. GAIN:	0.2% to 0.5%	
DIFF. PHASE:	0.2 Deg.	
K-FACTOR:	0.1% to 0.4%	
S/N RATIO:	VIDEO: 62dB to 68dB	AUDIO: 60dB to 72dB
CONTROLS:	IR, RS-232, RS-485, Ethernet, K-NET	
COUPLING:	VIDEO: DC	AUDIO: Input: AC; Output: DC
AUDIO THD + NOISE:	0.06% to 0.7%	
AUDIO 2nd HARMONIC:	0.02% to 0.2%	
POWER SOURCE:	12V 5A desktop power adapter	
DIMENSIONS:	27.78cm x 7.65cm x 4.36cm (10.94" x 3.01" 1.72", W, D, H)	
WEIGHT:	0.65kg (1.43lbs) approx.	
ACCESSORIES:	See Table 14	
OPTIONS:	Power supply, a pair of detachable rack-ears and shelf, RK-551 (for installing on a 19" rack as opposed to mounting inside the SV-1)	

¹ Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on your product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard.
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part 1: Residential, commercial and light industry environment".
- CFR-47: FCC Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B Unintentional radiators"

CAUTION!

- ☒ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ☒ Use the supplied DC power supply to feed power to the machine.
- ☒ Please use recommended interconnection cables to connect the machine to other components.

16 Detachable ESSENTIALS Kit CHECK LIST

Table 17: SummitView™ ESSENTIALS Kit CHECK LIST



PART	DESCRIPTION	#	☒
SV-551	SummitView™ Processor / Switcher	1	
C-D9M/D9F-3	RS-232 cable 3' (0.91m)	1	
BCP-2S-25	Speakers cable	2	
BCP-KNET-50	Balanced Audio/Control cable 50' (15.24m)	1	
C-UA/MUB-3	USB A to mini USB B cable 3' (0.91m)	1	
P.S 12V/5A	US and EU models According to country	1	
POWER CORD		1	
CD-ROM	RC Configuration software	1	
SCREWDRIVER	For installation	1	
RC-63DL	Room Controller	1	
C-UA/MUB-3	USB A to mini USB B cable 3' (0.91m)	1	
CD-ROM	RC Configuration software	1	
SCREWDRIVER	For installation	1	
SV-301	Wall Plate (Computer Graphics Video + Audio)	1	
C(P)-STP-50 ¹	STP cable 50' (15.24m)	2	
C-MGM/MGM-3	Molded Micro VGA to VGA cable 3' (0.91m)	1	
SV-302	Wall Plate (Composite Video + Audio)	1	
C(P)-STP-50 ¹	STP cable 50' (15.24m)	1	
C-RVM/RVM-3	Molded RCA RG-59 video cable 3' (0.91m)	1	
SPK-CC444	Ceiling Speakers	1	

1 CP-STP-50 is plenum-rated for the SummitView™ US; C-STP-50 is non-plenum for the SummitView™ Europe

17 Detachable STANDARD Kit CHECK LIST

Table 18: SummitView™ STANDARD Kit CHECK LIST



PART	DESCRIPTION	#	✓
SV-551	SummitView™ Processor / Switcher	1	
C-D9M/D9F-3	RS-232 cable 3' (0.91m)	1	
BCP-2S-25	Speakers cable	2	
BCP-KNET-50	Balanced Audio/Control cable 50' (15.24m)	1	
C-UA/MUB-3	USB A to mini USB B cable 3' (0.91m)	1	
P.S 12V/5A	US and EU models	1	
POWER CORD	According to country	1	
CD-ROM	RC Configuration software	1	
SCREWDRIVER	For installation	1	
RC-63DL	Room Controller	1	
C-UA/MUB-3	USB A to mini USB B cable 3' (0.91m)	1	
CD-ROM	RC Configuration software	1	
SCREWDRIVER	For installation	1	
SV-301	Wall Plate (Computer Graphics Video + Audio)	1	
C(P)-STP-50 ¹	STP cable 50' (15.24m)	2	
C-MGM/MGM-3	Molded Micro VGA to VGA cable 3' (0.91m)	1	
SV-302	Wall Plate (Composite Video + Audio)	1	
C(P)-STP-50 ¹	STP cable 50' (15.24m)	1	
C-RVM/RVM-3	Molded RCA RG-59 video cable 3' (0.91m)	1	
SPK-CC444	Ceiling Speakers	1	
SV-1 White	Housing unit for the SV-551 + power supply	1	
SV-2 White	Ceiling platform + Projector Bracket	1	
SV-CL-6 White	Column 6" (15.24cm)	1	

¹ CP-STP-50 is plenum-rated for the SummitView™ US; C-STP-50 is non-plenum for the SummitView™ Europe



For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



Kramer Electronics, Ltd.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com

P/N: 2900-000336 REV 2